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THE NATIONAL GEOGRAPHIC MAGAZINE

2,000 Miles Through Europe's Oldest Kingdom

BY ISOBEL WYLIE HUTCHISON

Illustrations by National Geographic Photographer Maynard Owen Williams

AN APRIL GALE was tossing the waves into spindrift as our ship thrashed out from the Firth of Forth on her 700-mile voyage to Copenhagen (København). The bitterness of ice was in the air; there was little to suggest that we were headed for a month of sunshine, a Danish Maytime as warm and fragrant as our fuelless British winter had been hard and ice-bound.

Forty-eight hours after leaving Scotland we sighted Skagen's lighthouse on the long hooked forefinger of Jutland. Thereafter we followed a mine-swept channel to the narrow Sound (Øresund) which divides Denmark from Sweden.

In Helsingør the copper towers of Hamlet's Kronborg Castle flashed in a watery sun as we approached the Danish shore. In its dark casemates sleeps Holger Danske, Denmark's King Arthur. So long has he slept, says legend, that his beard has grown into the stone; but if danger threatens Denmark, Holger will waken so quickly that the stone will be shattered as he wrenches his beard free.

Perhaps he stirred when the Germans slipped past Kronborg in the early morning of April 9, 1940, concealed in the holds of cargo ships. At all events, he gave his name to a famous Danish sabotage group defying the invaders of their common homeland.

As we neared Langelinie, Copenhagen's sea-boulevard, I looked apprehensively to see what changes war might have made in one of Europe's loveliest capitals, but, save for the absence of the Royal Yacht Club Pavilion (blown up by Germans), I noticed none.

There sat the "Little Mermaid" on her stone (page 156); there, across the harbor, rose the picturesque warehouses of the old Greenland Dock, from which tall-masted ships set out for Denmark's great island-colony; there, still unharmed, soared the lovely spire of the Bourse with its twisted dragon tails. These at least were unchanged.*

End of an Era

Yet an era was ending. Across the water came the sound of tolling church bells. In the Royal Chapel of Christiansborg King Christian X lay dead under his ermine pall, his coffin surmounted by the crown of Denmark. Before his bier, hour after hour, trooped tens of thousands of every age and class, to whom in Denmark's dark hour this beloved King had been a beacon.

Little children drooped asleep over parents' shoulders or sucked ice cream (the panacea of the Dane) with their elders, all patiently waiting to pay brief homage to the man who had been father rather than King to his democratic family of four million. It was more than three hours before I could enter the chapel, and many were still arriving who could scarcely hope to gain admission before the gates closed.

One thinks of the Danes as a family more than a nation, for of all European nations they seem to me the most domestic. In postwar Europe they are also an uncommonly happy and well-fed family.

The most tragic place in Copenhagen today is the little copse at Mindeparken, Ryvangen,

* See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Royal Copenhagen, Capital of a Farming Kingdom," by J. R. Hildebrand, February, 1932; and "On Danish By-Lanes," by Willis Lindquist, January, 1940.

In Rationed England, Danish Eggs and Butter Help Relieve the Austerity of Postwar Living

Through a model packing station in Skive pass millions of eggs a month. Each egg weighs and sorts itself in this automatic grading machine. Each cold-storage vault holds enough to provide a breakfast egg for every Scot in Aberdeen. Exports have not reached the prewar level when Danish hens laid enough in a year to provide one egg for every person on earth.

on the city's outskirts, where over 100 members of the Danish resistance movement perished. They were tied to trees, shot, and buried where they fell. The ground has now been cleared and made into a tidy cemetery.

When I saw the long rows of graves on a bright May morning they were purple with pansies. This peaceful graveyard on the fringes of the tramline is Denmark's Lidice. Here perished some of her bravest sons.

I had promised to deliver six lectures for the Danish-British Society, a flourishing body which has branches in several parts of Denmark. These lectures took me first to Viborg and Skive, and to Nykøbing on the island of Mors (map, page 144).

It was impressive to find in these Jutland towns audiences which understood English and showed such keen interest in other lands. Many of those I met were members of the National Geographic Society.

Europe's oldest kingdom is one of the Continent's best instructed countries. Compulsory education, introduced in 1814, was reinforced 30 years later by Grundtvig's famous Folk High Schools. These aim to train adult students in the art of living (page 150).

It is rare to find a Dane who does not understand some English. Though fellow travelers were tolerant of my efforts to pronounce their difficult language, they preferred to try out their English. Talk was usually of food and prices. In spite of spoliation during war years, Denmark is Europe's biggest food exporter.

Resistance to German Occupation

On the train to Viborg I traveled with the mother of the engine driver. Her talk was not of farming, but of hard times during the German occupation. Her son, a member of the resistance movement, had been in

Jewels Ltd.

No Bicycle Built for Two Is Needed When Junior Goes for a Ride

In Copenhagen, where the land is flat, there are ten bicycles to one motorcar. At the noon hour or day's end, a motorist feels the ratio is higher. Skillful but daring cyclists weave in and out, many of them balancing a small child. Some youngsters taste the joys of cycling before they learn to walk.

constant danger of his life from both sides, because of Danish sabotage on railways used by Germans. At last the Germans threw him into a concentration camp.

"Fortunately it was in Nord Slesvig," she said, "which was at least better than Germany! You cannot imagine our joy when the war ended. No one would believe it. All along the street people were opening windows, putting out their heads, and asking if it were true. Then—out came the flags!"

My hosts at Viborg were a lawyer and his wife who had escaped to Sweden one jump ahead of the Gestapo. By night they slipped across the Öresund in a sailboat with their family. Fortunately their timbered house escaped damage, as did Viborg's old cathedral with its arresting modern frescoes.

From Viborg I went on to the pleasant town of Skive. Its streets climb a hill from which the twisting Skive River can be seen wending its leisurely way. Not far away lived the farmer-poet Jeppe Aakjær, translator of Robert Burns.

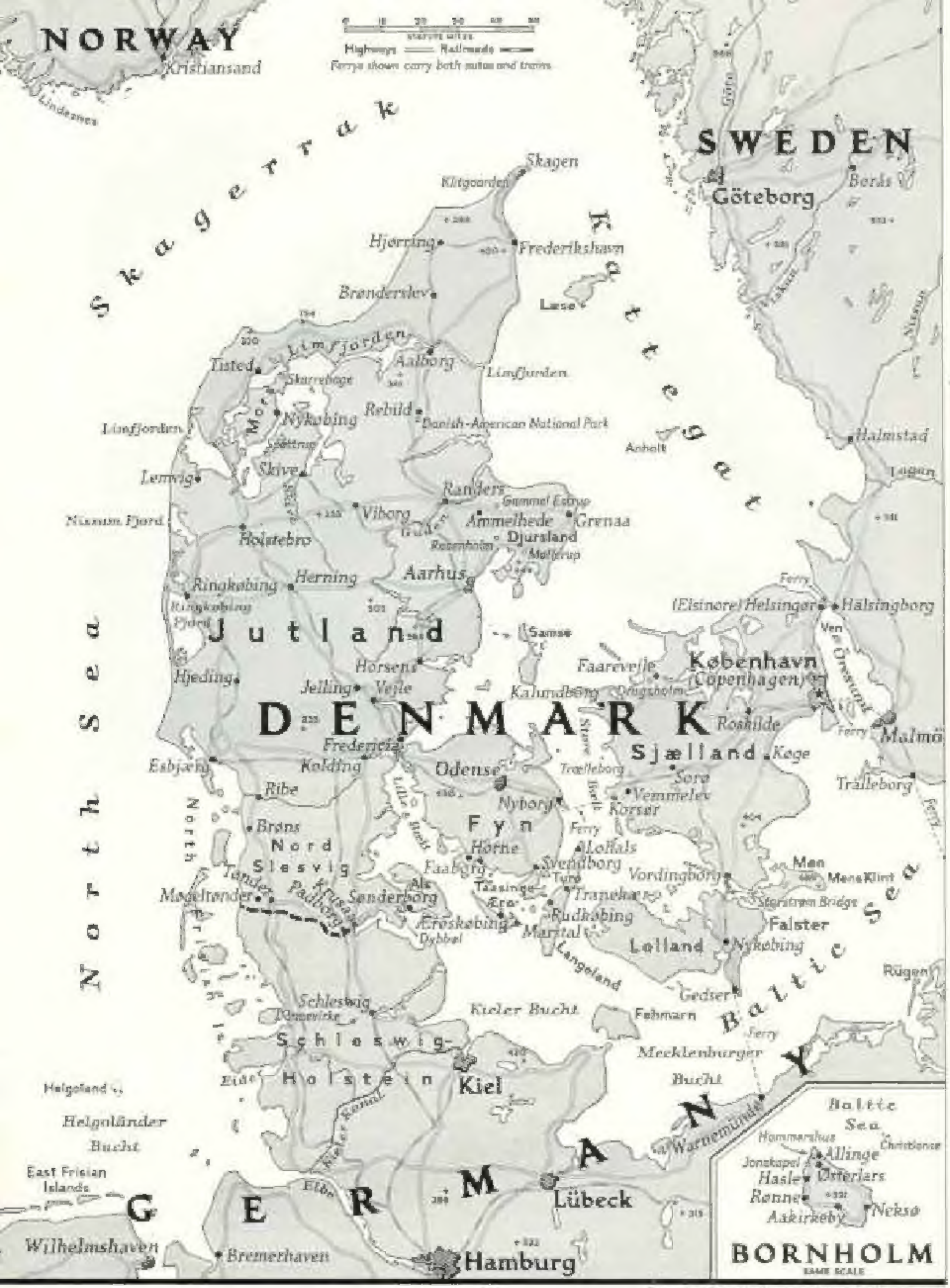
Skive is also the home of northern Europe's most modern egg-packing station, which to an egg-starved Briton seems a veritable Aladdin's Palace (pages 142 and 147).

At the door eggs in their thousands were being unloaded from lorries.

After being graded and candled, they are placed in boxes in cold storage chambers. Each full chamber holds 540 cases, and each case contains 30 dozen eggs—enough to supply a postwar Briton with his weekly egg for 3,738 years!

At Skive's large "bacon factory" it was (fortunately for my feelings) an off-day. For this the manager apologized.

"It would have been more interesting for you," he said, "had it been a day when we slaughter. Our trade is not what it was before the war, when we killed thrice weekly. Now we can do so only once."



Drawn by Harry E. Oliver and Irvin E. Allaman

Like a Hooded Ghost, Jutland Hovers Over Denmark's Island Kingdom

Viking sea-lords, forebears of the Danes, controlled these three straits between Baltic and North Seas and roamed the seas to France, England, and even Greenland. In an area twice that of Massachusetts live 4,000,000 Danes.

In an adjoining hall I saw prime sides of bacon steeping in brine. "All our best goes to England," I was told. "Britain is our largest customer. We Danes can get only the second-best, and not much of that just now. We need more fodder for our pigs; then we could have more sausages and *leverpostej*" (a delicious liver paste).

Selecting a couple of sausages from a "rope" hanging from the ceiling, the manager flung them into a vat of boiling water. When they were ready, we ate them in our fingers and found them excellent. We went away still eating, for it is almost impossible to avoid doing so anywhere in Denmark.

Near Skive, in a 16th-century manor house, is the well known Krabbesholm Folk High School. In early May it was full of gay young women improving their general education and learning to spin and weave. The school had a memorable atmosphere of quiet happiness on the bright spring morning of my visit. The woods which surround it were starred with anemones, and fruit blossoms hung in snowy cascades above the garden walks.

When the bell rang for dinner we all sat down together, from gardener to headmaster, to enjoy the simple but ample fare. With such "Schools of Life," it would seem that the little country on the forefinger of Europe has much to contribute to both the spirit and the appetite of a distressed continent.

Insulation Millions of Years Old

"This," said the manager of the Skarrehage Moler Works, "is the earliest impression we have of life in Denmark. It is about 60,000,000 years old."

"This" was a bit of Moler, a substance of marine origin found only in Denmark, on which was imprinted the pattern of a fishlike backbone. I saw it on the island of Mors in the Limfjorden, famous to geologists for the unusual volcanic formation of its cliffs, and, incidentally, to gourmets for its oysters.

At the north end of the island lies Skarrehage. Here Moler is made into insulating bricks, exported to all parts of the world.

When I returned to Copenhagen I found a letter from a Danish friend inviting me to the most remote of Denmark's Baltic islands, Bornholm.* After an all-night boat trip from Copenhagen I transferred to a motorcycle sidecar for an island tour.

We visited the granite cliffs and flowery dell at Jonskapel, heard a nightingale singing in the wood below the medieval fortress of Hammershus, and tasted Bornholm's specialty—golden-skinned smoked herring—when we lunched in the fishing port of Allinge. At Osterlars we visited one of the island's four remarkable round churches, of which there are seven in Denmark.

At Nekso, in the southeast corner, I came face to face, for the first time in Denmark, with the devastation of modern war.

Under the guise of docility the sturdy islanders played an important part in the Danish resistance movement, as they had done in 1658. At that time they had refused to obey the Copenhagen authorities, who had ceded the island to Sweden, and had risen as a man against the invaders. From 1660 until the Germans arrived in 1940 Bornholm belonged to Denmark.

American Airmen Smuggled to Sweden

Sweden played a very different part in World War II. Weapons from her ports were smuggled to Copenhagen through the Bornholm backdoor, by which Danish saboteurs and Jewish refugees escaped in the reverse direction. Not a few American airmen, forced down on the island, were cared for and conveyed to safety in Sweden by the islanders, regardless of the risk they ran.

On May 7, 1945, one day before victory in Europe, the tragedy began. The Germans on Bornholm insisted they would surrender only to British troops, refusing to give up their arms to the Russians. They fired on two Soviet planes flying in over Nekso.

This was the signal for a two days' air bombardment by the Russians which laid most of Nekso and a good part of Ronne in ruins. Small wonder if, when the rest of Denmark rejoiced, there was silence in Bornholm.

In Copenhagen again, I was joined by Dr. Maynard Owen Williams, of the staff of the NATIONAL GEOGRAPHIC MAGAZINE, who was to explore Denmark with me.

On the first morning we took a short preliminary trip. To satisfy the morbid fancy of his two Scottish passengers—my sister and me—Dr. Williams drove us past flowering orchards and whitewashed farms to visit a mummy.

Our goal was the little church of Faurevejle on the northwest side of the island of Sjælland, where James Hepburn, Earl of Bothwell and third husband of Mary Queen of Scots, sleeps uneasily under the constant inspection of the curious—a singular fate for a man who spent his last five years in solitary confinement in the dungeon of the near-by castle of Dragsholm. There madness and death relieved his sufferings in 1578.

* See "Bornholm—Denmark in a Nutshell," by Mason Sutherland, NATIONAL GEOGRAPHIC MAGAZINE, February, 1945.

Denmark's Mythological Mother, Driving Her Sons as Draught Bulls, Plows a Sea Furrow Between Sweden and Zealand

Before the Goddess Gefion returned to Valhalla, she asked her royal lover for land for her four sons. He granted her as much as she could plow around in a day. Transforming her sons to bulls, she plowed across the neck of a peninsula, making Zealand (Sjælland) an island. Anders J. Bundgaard's fountain and statue at Copenhagen commemorate this legend. Waves represent furrows; fountain jets, the dust clouds of her plowing.

To Appreciate Such Oval Wealth, Just Picture Each Egg "Sunny Side Up"—About a Thousand Dozen

In 1947, when one strictly rationed egg was a blessing in England, Denmark sent more than $100,000,000 worth of eggs, butter, bacon and other products to Great Britain. This was an average export of $13 for each Dane. Small Denmark is postwar Europe's largest food exporter.

Bothwell had escaped from Shetland only to fall into the hands of Frederick II of Denmark, who was a lover of dogs if not of men, for on his tomb in Roskilde Cathedral his favorite hound is commemorated by an inscription.

The congregation was just dispersing when we climbed the hill on which the church stands, for it was Whitmonday. A Lutheran pastor in cassock and ruff as stiff as Queen Bess's own stood in the doorway, apparently unabashed at having just added another to four centuries of sermons, for the list of pastors at Faarevejle goes back to 1536.

Bothwell's Mummy Leers at Fate

The church officer rolled back the matting in the center aisle and lifted a trap door. We descended a short ladder to the vault where the coffin, accidentally unearthed in 1858, has been placed, and peered through the glass lid.

The skeleton remains partly mummified. One blind eye and a wound in the skull are held by some experts to be sufficient proof—though others doubt it—of its identity. The mouth is a little open and drawn back, as if in a last defiant snarl at fate.

We left Copenhagen next morning, Nykøbing on the Island of Falster our destination for the night. Falster was linked to Sjelland in 1937 by the great Storstrøm Bridge, some two miles long (page 169).

South of Copenhagen we stopped at Køge to visit the oldest dated frame house in Denmark, the delightful little Borghus built in 1527 and still standing on its original site (page 179).

We passed into the high, dark church of St. Nicholas close by. Christian IV's richly carved pew, the pulpit, and the organ loft, decorated by Henrik Reinecke of Køge with unusual panels depicting the five senses and nine muses, all stand as they did three centuries ago.

Køge, we gathered, was a conservative town, for even its latest building fostered an old tradition. From a staff on its unfinished roof hung a triple wreath of evergreens. We asked a passer-by what it meant.

"An old custom," was the answer.

Birthdays and gold and silver wedding anniversaries, as well as house warmings, call for flags and garlands in this friendly land which understands so well the art of living.

In the market square, opposite the oldest Town Hall still in use in Denmark, stood a Victorian carriage and pair with a coronet on its panel and a liveried coachman on the box (page 161). This equipage of nobility was a rather unusual sight in this democratic land, where even the King walks unattended. ("Who looks after the King?" a German trooper had asked a Copenhagen messenger boy. "We all do," was the lad's classic answer.)

From Falster we crossed by ferry to the island of Møn. Its remarkable chalk cliffs, in places 400 feet high, are a famed beauty spot (page 173). They are wooded to the edge and intersected by glades full of unusual wild flowers. From these tumbled masses of chalk the sun drew delicate lights of gray-green and rose, reminding me of Greenland's icebergs.

We wandered by narrow paths along the cliff tops with their background of glittering blue sea. Far off a little fishing craft spread its sail toward the island of Rügen.

Regretfully we turned back to Sjelland and came to Valdemar Atterdag's old goose tower at Vordingborg. The goose with flapping wings which surmounts it was Valdemar's medieval way of thumbing his nose at enemies across the sound!

We spent the night in Sorø to visit this old-world town's famous Academy, Denmark's largest state boarding school, standing on the site of Bishop Absalon's 12th-century monastery. In 1586 Frederick II turned the building into a school "which by the royal munificence was to house the children of nobles and commoners in equal numbers."

The school has had its ups and downs, but it now possesses rich endowments. Parents of modest means whose boys are clever enough to pass the stiff entrance examinations can have their sons educated under the best conditions for very low fees.

Viking Settlement at Trælleborg

But even these venerable buildings seemed young compared with the Viking settlement at Trælleborg. Sheep were grazing in the green enclosure where the Vikings built their wooden-walled fortress on a broad headland between two small streams (page 180).

A thousand years ago these meadows were navigable waterways to the Great Belt (Store Bælt), and the site was convenient for the ses rovers, who would be surprised to know that every summer thousands of visitors come to Trælleborg to see the traces of their village.

The sun was near setting when we came at last by shining ways to Odense. Though it is an important industrial city and Denmark's third largest town, an atmosphere of fairyland clings to it. The street in which Hans Christian Andersen's birthplace stands is like a fairy tale itself, with its low elfin cottages.

From my window that evening I had a view of copper spires, red-tiled roofs, and chestnut trees brilliant against the setting sun.

A Bathing Girl on Marstal's Warm Sands Nibbles Ice Cream from Denmark's Dairyland

Outside the Bardal Hall New Housing Their Folk School Young Farm Wives and Career Women Do Gymnastics

Childhood's Fancy Dwells with Storybook Characters in Hans Christian Andersen's Museum House in Odense

In a Splendid Dress, Established for Fourth of July Ceremonies, 45,400 Dones Celebrate American Independence

Each [illegible] the [illegible] stripes and [illegible]

Denmark's Beautiful Queen, Honored King, Military Aide, and an American Exponent Celebrate the Fourth

Summer Is Brief; Dames Prop It to Go Hilly, Swimmers Swarm the Beaches, but This Sedate Crowd Prefers Tea on a Terrace

In the Danish Cities a Scarlet Jacket Screams "Music!"

[illegible]

The Gourmet Prezzemolo Says a King Once Shopped Here

[illegible]

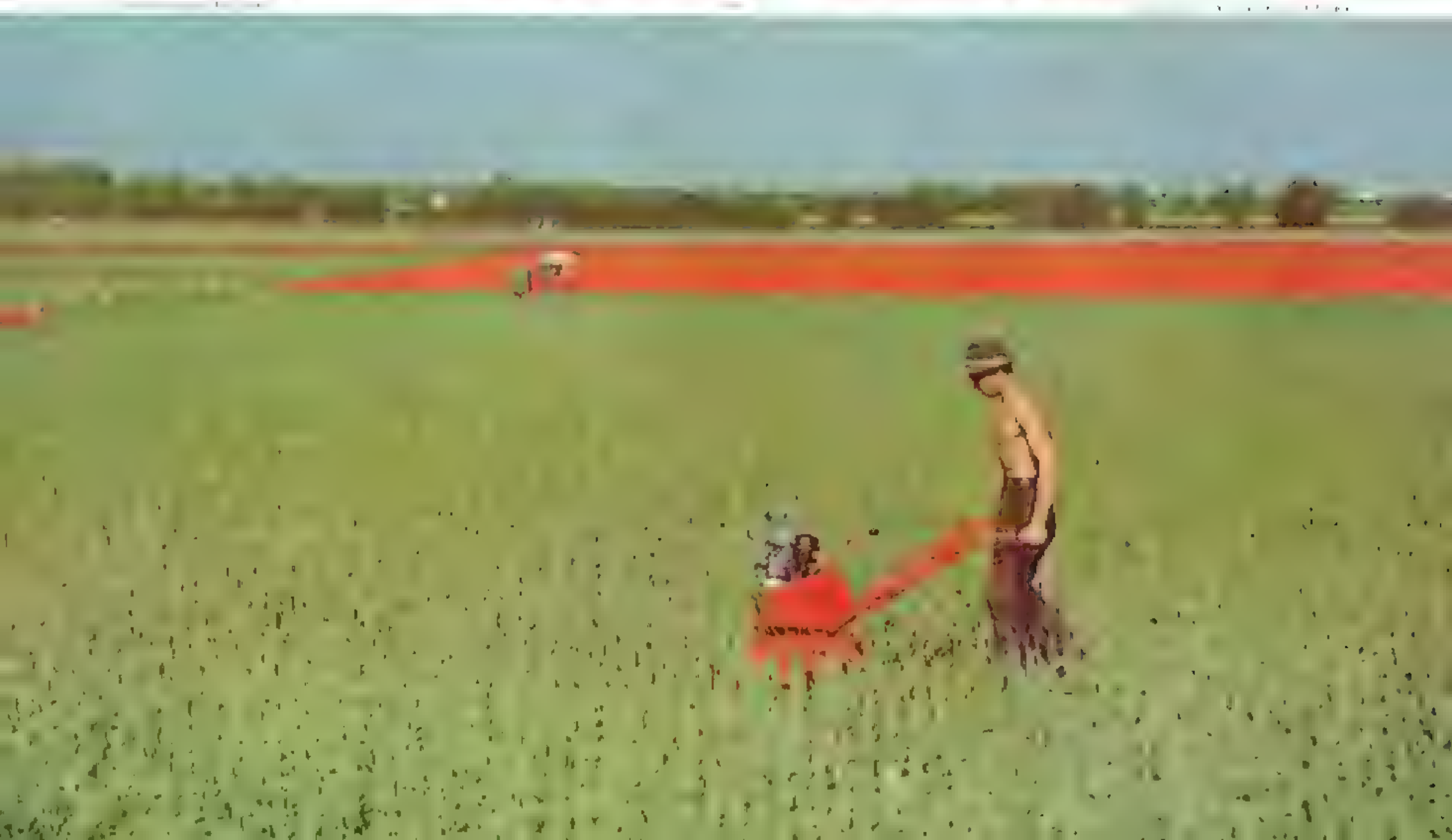
Little Mermaid Grips Rock with Fin Feet and Drinks In the Sea with Penetrating Eyes

Two Shrunken Heads Bearing the Colors of This Tribe and His Parent

An Eskimo Family Is Grouped Among Three Phases of Underglaze

Across Fate's Dial Landscape a Herder Pedals Home Leading His Drowsy Stray on One of Denmark's Good Roads

Eva Gives a Portion of Her Precious Soil to Boaz. This Organic Tulip Bed Is Cultivated in Mother



Le Hesinger, Elsinore, Shakespeare's Setting for *Hamlet*, Dames Watch The Scenery's Still Gate and the Launching of a Ship

In Roge, Noted for Its Antiquities, a Stately Carriage Appeared as if Out of a Victorian Novel or a Hollywood Set

Old Town's Millstream Swans, and Half-timbered Houses Illustrate Idyllic Bygone Days of Industrial Aarhus in Jutland

A Walking Tour of Old Town Is a Magic Journey into the Long Ago

[illegible]

A Pipe Outside the Tobacconist's Breathless Miscellany Corridor and Sticky Lantern

[illegible]

In their branches a thrush was singing lustily; could it be Hans Andersen's nightingale?

In the museum which has been added to the poet's cottage the story of his life, which he himself rightly regarded as another fairy tale, is unfolded (pages 151 and 174).

Here are the many souvenirs which he loved to collect, including a doll he had won as a prize by a young girl, Abigail Tompkins, when American children showed their love for the poet by starting a collection in his aid. (Against this, however, he protested, for he was not in need of money). A letter sent to Andersen by Abigail 40 years later shows how long her admiration lasted.

Though Andersen never visited the United States, his interest in it is shown by two finely illustrated volumes in his library, published in 1872 and entitled *Picturesque America*.

Where American Soldiers Relaxed

Thousands of American soldiers from Germany have relaxed on the sands of Kristiansminde, close to picturesque Svendborg on the southern coast of the island of Fyn.

Fyn is the land of *herregaarder*, red brick 16th-century manor houses mirroring copper spires in moats and ponds—Rygaard, built in 1537, with long knights' gallery and immensely thick walls; Glorup, where Hans Andersen was Master of Ceremonies at the victory celebrations for Danish troops in 1848-50; lovely Hesselager with its watchman's gallery from which, through slots in the wall, boiling lead could be poured on the heads of assailants in days of old.

"But you must see Egeskov, too," said Hesselager's gracious chatelaine, the Baroness Karen Bixen-Friercke, "for it is one of the loveliest castles in Denmark."

Egeskov's red walls were colored yet redder by a fiery sunset when we saw them—seemed as truly a fairy palace as far-famed Bradenburg, home of Count Reventlow, the reflected towers of which shimmer in the Lake of a beautiful park amid the shadows of crimson, white, and golden water lilies. It is not surprising that Fyn gave birth to Hans Andersen, who was a welcome guest at many of these manor houses.

From Svendborg we crossed to the orchard-islands of Tåro and Tåsinge, a few minutes distant. Admiral Niels Juel, who won his famous sea victory over the Swedes at Kioge in 1677, purchased Tåsinge with his prize money, and it is still, like Svendborg, a center for sailors and yachtsmen.

It was Sunday; family parties were setting out for a day on the water. Everybody went from grandma to the baby. Dr. Williams stopped to take a photograph, and Grandma herself came forward, broke blue sprays from the fragrant bush overhanging her garden wall, and smilingly presented them to us. She spoke no English; it was her graceful way of "saying it with flowers."

From Tåsinge we crossed by ferry to the old market town of Rudkøbing on the long thin island of Langeland. We found its medieval fortress of Trankær shattered and deserted. But Lohals, the little port at the north end of the island, was a scene of liveliness, with a merry children's party in full swing at the inn.

Off southern Fyn lies the tiny island of Ærø with its delightful "skipper" towns of Ærøskøbing and Marstal. We enjoyed Ærøskøbing from the twin pumps in its ancient square, which still supply water for the town, to its friendly inhabitants.

In Marstal we stopped to photograph a cottage. Its owner invited us to view her remarkable little home, which she and her husband had turned into a private museum with no thought of personal gain (page 174).

There were carved chests in which brides two centuries ago kept their linen, painted wooden "flat-irons" for smoothing clothes, ships' figureheads—even a couple of china dogs brought by some mariner from Scotland, for the sea, so vital in Denmark's history, breathes through the life of Ærø.

In most Danish churches hangs a ship model presented by some sailor as a thank offering for his preservation in shipwreck, perhaps, or merely as a thank offering for ships. In the beautiful old church at Marstal there are five.

A sum of money has been left by a captain of the town to provide care for the numerous seamen's graves in its churchyard. We clambered to the top of the church tower, from which there is a clear view toward Kiel.

"During the war," said a Dane who had accompanied us, "we saw the rounds of Allied bombers passing over. We could hear the bombs and see the flames in Germany. How this old tower used to shake!"

A Town of Romance and Fairy Tales

We spent our last night on Fyn in the charming town of Faaborg, where in August 1830, Hans Christian Andersen met his brown-eyed first love, Riborg Voigt.

The summerhouse still stands where he vainly courted her, for she was secretly betrothed to another. But until her death Riborg kept a little bunch of flowers which the poet had given her, and when Andersen died a letter from Riborg was found in a wallet on his breast.

In a Former Fishing Village, a Fishwife Cleans Fish Beside the Statue of Her Clan

[illegible] Merchants [illegible] Close to C. H. [illegible]

It was late when we reached Faaborg, but [illegible] we were whisked off to visit Fyn's only round church at Horne, and the rolling [illegible] Fyn's Alps—which lie behind the town.

Faaborg is called the "town of painters" and has a fine art gallery, for delight in painting is a marked characteristic of the Danes. Local museums, too, are frequent in Denmark.

The oldest and largest of the bells in the [illegible] in 1946. Fortunately, in the last war it escaped the fate of many [illegible] blessing bells melted into cannon balls by the Germans.

From Faaborg we crossed north and [illegible] to the mainland for the Little Belt [illegible] Bridge, completed in 1935.

Our first pilgrimage was to Jelling to see the great [illegible] carved with runes. Here [illegible] commemorates his parents, King Gorm and Queen Thyra, and also himself—"The Harald who conquered the whole of Denmark and Norway and made the Danes Christians."

On the front of this important monument is a relief of the Crucifixion, and on the side a carving of a dragon wrestling with a serpent. Jelling's little church is almost hidden between [illegible] which Harald raised to his parents. [illegible] Denmark.

The great explorer Vilhjalmur Stefansson lives—over sixty when he discovered the Alaska chain and named the Alaska. [illegible] Home [illegible] land. In Arctic affairs he attracted the attention of Peter the Great, under whom he had service.

He never returned to his native land [illegible] on Bering Island in the North Pacific, but [illegible] vestibule of Vor Frelser [illegible] Hansen.

From Hansens we sailed on [illegible] Hansen's beautiful ketch, *Nordens II*, [illegible] the fiord. A cool breeze filled [illegible] when we returned by moonlight [illegible] a good [illegible] of a good [illegible]

[illegible] visit to an

experimental farm, we paused in a wood to see the touching memorial to "Ange and Hardy," thirteen-year-old schoolboys who lost their lives in 1945 when they blew up a German ammunition dump there. A third boy escaped in time. Denmark's resistance movement began among the schoolboys of Aalborg, who took Churchill's name for their group.

Near by we visited a Danish camp for displaced German civilians. Though well fed and housed in army huts, they had a dispirited air. Despite vigorous protests, German refugees were poured into Denmark in thousands in the spring of 1945. We were told that Denmark was supporting about 200,000, costing the small country more than even its hospitality could afford. By the end of 1948 they were all repatriated.

We joined some 60 representatives of the foreign press invited to spend two days in east Jutland to study Danish farming. On a brilliant morning we set out in three omnibuses to visit dairies and farms south of the city of Aarhus.

After lunch we learned of the "almost explosive" development of dairy farming in Denmark, which started with its first dairy at Hjedding in west Jutland in 1882 and today includes nearly 1,800 cooperative dairies, as well as 150 private ones. A century ago there were only 600,000 milk cows in the country; today there are 1,500,000.

The geographer is tempted to wonder if the success of Denmark's cooperative system may not be due literally to the "lie of the land." Denmark is a flat country with no dividing mountains or valleys such as constrain the Norwegian or the Scot to individualism.

Later we visited a typical Danish small holding. Its owners, with the help of their son, worked their twelve-acre farm themselves, growing a variety of crops. They also attended to eight cows, three sows with litters, 100 hens, and several beehives. The farmer's day in Denmark has no eight-hour limit!

Aarhus Specialty: Meat for Dessert

Visitors to Aarhus, Denmark's second city, recapture something of the leisure of the past as they wander the reconstructed streets of Old Town, the renowned Folk Museum founded by Dr. Peter Holm in 1909 (pages 162-164).

This open air "museum" contains 45 old buildings rescued from destruction, the most recent being a saddle maker's delightful little house and a tannery moved from Randers.

In the startlingly modern Town Hall, with its 197-foot-high clock tower and interior decorations even more modern, the Burgomaster entertained his 60 guests at a luncheon which lasted for two hours and wound up with a third meat course instead of a sweet. This, we were told, was an Aarhus specialty!

The Town Hall is not the only modern building in Aarhus. Its University started work in 1928 and already has 1,000 students. Used as a headquarters by the Gestapo, the University was bombed by the British in 1944.

At the historic mansion of Mollerup, on the Djursland peninsula, the journalists were entertained by its owner, a lady who manages one of Jutland's largest farms and possesses a fine riding stable. Ordered out of her house by the Gestapo, she refused to leave her home entirely in German hands and moved from her mansion to a room above the stable.

Our tour of Djursland ended in a Danish opera singer's home, one of the show farms of Jutland with its long barns of sleek milk cows, stables of powerful Jutland horses, and well-planned fields.

Resistance Fighter of 600 Years Ago

It was raining at last when we left Aarhus to cross the high rolling district of north central Jutland. Our destination was Aalborg on the Limfjorden, which cuts the peninsula in two. As we drove north the sky partly cleared, and sun, wind, and cloud made the day a pictorial one. Bare fields stretched on either hand; here and there Millet-like men and women were boring against wide horizons.

We crossed the Niels Ebbesen Bridge over the Guden—one of the largest rivers in this land of small streams—and came to the red-roofed town of Randers. The door of the old church of St. Morten was open, and we went in to see its rich 17th century carvings.

Outside in the square a statue of Niels Ebbesen, Denmark's Robert Bruce, recalls the national hero who in 1340, at the head of a small band of followers, killed the German usurper, Count Gerhard. In recent times Ebbesen's name was an inspiration to Danish resisters. Several of these perished near Randers, and their honored names are commemorated on a great boulder.

Randers' Tourist Bureau is housed in one of the town's oldest buildings, the Helligaands Hus, which belonged in the Middle Ages to the friars of that order. The half-timbered building has a stork's nest on the chimney.

Near Randers stand the castles of Gammel Estrup and Rosenholm. For six centuries Gammel Estrup passed down in only two families. The last private owner, Count Christen Scheel, died in 1926, and since 1930 the castle has been a museum.

Lovely Rosenholm, with its moat and bridge guarded by two sad-faced lions, its pictures

Mirror a Cultural Background: Young Folks of Aalborg Have Fun

A charity carnival at Aalborg gives Danes on a high swinging merry-go-round a chance to kick up their heels [illegible] to a [illegible] at the same time.

[illegible] the family of Rosencrantz—a reminder that we are in Hamlet [illegible]

In Aarhus here we passed [illegible] the time-worn castle which marks the [illegible] the young Hamlet [illegible] Rosencrantz [illegible] that [illegible] atmosphere about Aarhus [illegible] Cathedral [illegible] was, in [illegible] Aarhus [illegible]

Dancing Celebrate the Fourth of July

The International Exhibition at Aarhus [illegible] Denmark and America [illegible] Museum Park at Rebild in north Jutland, with [illegible] Lincoln [illegible] John Ericsson [illegible] the national [illegible] Mr. [illegible] presented to Denmark [illegible] America [illegible] where they might meet annually to celebrate Fan [illegible]

No livelier setting could have been [illegible] than these high [illegible] the [illegible] and the birch [illegible] to the [illegible] Denmark [illegible] America [illegible] Independence Day [illegible] Rebild [illegible] King [illegible] Crown Prince [illegible] when Crown Prince

Beneath a Turnpike Bridge, Danish Children Gobble Their Ice Reward for Fasting

The Storebælt Bridge, linking Zealand to Sjælland, was opened in 1968. Resting on 31 piers, it carries eight [illegible]

and Princess, and a gathering of 45,000 people assembled from all parts of Denmark and [illegible] Speeches were [illegible] and American Pipers. Some used [illegible] to deliver greetings to the old country from [illegible].

The way from Kaelderne to Aalborg was [illegible] beautiful park [illegible] the Danish [illegible] Aalborg [illegible] Christian [illegible] presented by each state of the Union, it houses [illegible] days, including a covered wagon from Utah.

Not far from Rebild is a [illegible] Danish [illegible] Mine." A golden-haired maiden [illegible] door and led us into the bowels of the earth. We [illegible] her, more [illegible] than the [illegible] were [illegible] through the [illegible] Presently we [illegible] carving out of a chalky wall [illegible] a large [illegible] lady woman embracing a man [illegible].

"Naomi and Ruth?"

"No. [illegible] and Nord [illegible]"

[illegible] with the works of [illegible] who died in [illegible] warmer in winter than [illegible]

Copenhagen's "Umbrella Lady" Crosses Down at Town Hall Square

[illegible]

At Jutland's northern tip we stood amid the sand dunes. Through a bare, flat country we had traveled that morning from Aalborg. Pasture had given way to heath; pine woods bound the sands. Near the village of Skagen we had found amid the pines the drowned tower of St. Laurentius' church overwhelmed by a great sandstorm which swept this coast in 1775.

Half hidden in the blue sea grass beside us crouched the low memorial to Denmark's lyric poet, Holger Drachmann. Artists were the first to discover the windswept charm of Skagen, now a popular summer resort. The King of Denmark has his summer villa, "Klitgaarden," near by.

Denmark can give points to most countries in her care for the aged. The Ministry for Social Affairs built more than 4,000 small rent-free apartments for their accommodation in Copenhagen, and almost every town of any size has its Old Folks' Home.

Returning to Aalborg, we visited one which is unique. It is housed in an old monastery of 1430, which has been completely reconditioned, though it still retains on the walls of the chapter house remarkable 15th-century murals. The old people occupy pleasant single-room homes in the upper story.

"The old folks usually become so attached to their homes," the warden told us, "that they don't want to leave them. When one old man in a Randers home inherited a large fortune, he gave all the money back to his 'asyl' for a new extension so he wouldn't have to leave his single room!"

Castle Walls Hid Smuggled Weapons

Motorists in a hurry can travel the length of the Jutland peninsula in a long day. We went more slowly, passing once more through Viborg and Skive. Near there, accompanied by a historically-minded waiter (who would accept no reward save the satisfaction of showing his country to strangers), we visited the famous castle of Spottrup.

Denmark's finest example of medieval military architecture, Spottrup stands amid marshes which were once sea. Castle walls, eight feet thick, hid weapons smuggled over from England during the war.

"Spottrup," explained the caretaker, "shows Denmark's history in a nutshell. It has belonged from bishops to nobles, from nobles to large farmers. Now the State has bought it and split it into small holdings for many farmers. That is good; that is Danish democracy and very happy."

All except the storks, who are not, perhaps, democrats. Though the rusty wheel where

Her Next Egg Is Based on Tel, and Tel,

[illegible] Denmark's

they built their nests still stands on the chimney stack, the storks left Spottrup with the last private owner.

We found them at home, however, when we arrived next evening in the old south Jutland town of Ribe. It was a long drive from Skive to Ribe, for we chose less frequented roads in a world of sand beside the North Sea.

Soon after passing through the bustling town of Esbjerg—Denmark's only ice-free commercial port and the busy terminus for traffic with England—we saw rising over the marshes, as Ely rises over the English fens, the square tower of Ribe cathedral.

Here in 862 Bishop Ansgar built his wooden church, replaced, 500 years later, by the present building. In the Middle Ages ships from Ribe sailed to all parts of Europe.

"Have you seen our storks?" the cathedral custodian asked when we came down from the tower. Yes, we had counted five or six nests above the red tiles of this delightful town. The custodian said we should have counted 15, for Ribe is the sort of place where they number their storks.

From Ribe we travelled in the print of ancient wars along the fringe of Nord Slesvig.

This Danish borderland is historic ground. At almost every crossroad memorial stones remind the visitor of Denmark's writhings to free herself from the talons of the German eagle—her short-lived success in 1848, and the long agitation of Nord Slesvig under German rule from 1864 to 1920.

Stork Nests on Party Line

At Brons we were halted by a stork whose fame had reached Copenhagen before we left there. Small wonder, for this adventurous bird had built its huge nest on the top of a wayside telephone pole, where it was unconcernedly rearing its chicks (page 171).

We drove to the old garrison town of Tønder through wilder country, where until the end of the 18th century wolves still were hunted. This historic border town once employed 12,000 lace makers, but their delicate art is now almost extinct.

The skill of the thatcher, however, is still in demand in the near-by village of Mogeltønder, where we found one of these artists hard at work on an old roof.

At Tønder we were close to the present German frontier, which most Danes, not least the south Slesvig minority, would like to see withdrawn to its old geographical limits north of the Eider. There the great earthwork of Dannevirke was begun by the Danes in the 9th century to repel the barbarian hordes from the south.

Near the frontier village of Padborg a barrier of barbed wire and a sentry-post stopped our further advance. Peeping over the wire, we saw a woman and child hand in hand walking up the street.

This fence dividing Slesvig into two zones seems a very artificial barrier to those it stops. As we continued on our way to Krusaa, we wondered how it feels to live in an area where a few yards either way make such a difference in calories!

Krusaa is a busy place with much military traffic. Officials permitted me to walk to the German side, where the Union Jack flew above dispirited German soldiers, who looked at me glumly. In a near by sentry box an imperturbable British soldier smoked a pipe over his hometown newspaper.

Crossroad Memorials Teach History

A little beyond Krusaa a company of school children were gathered around a crossroad memorial. "At this spot," recorded the boulder, "Christian X met the Danes of south Slesvig on 12th June 1920. They shall not be forgotten."

The sun had set on Dybbøl Mill, and Denmark's historic battleground lay in shadow as we came over a rise and saw below the fertile island of Als and its capital, Sønderborg. Prussian guns destroyed much of old Sonderborg in 1864, but the town still retains an old-world charm.

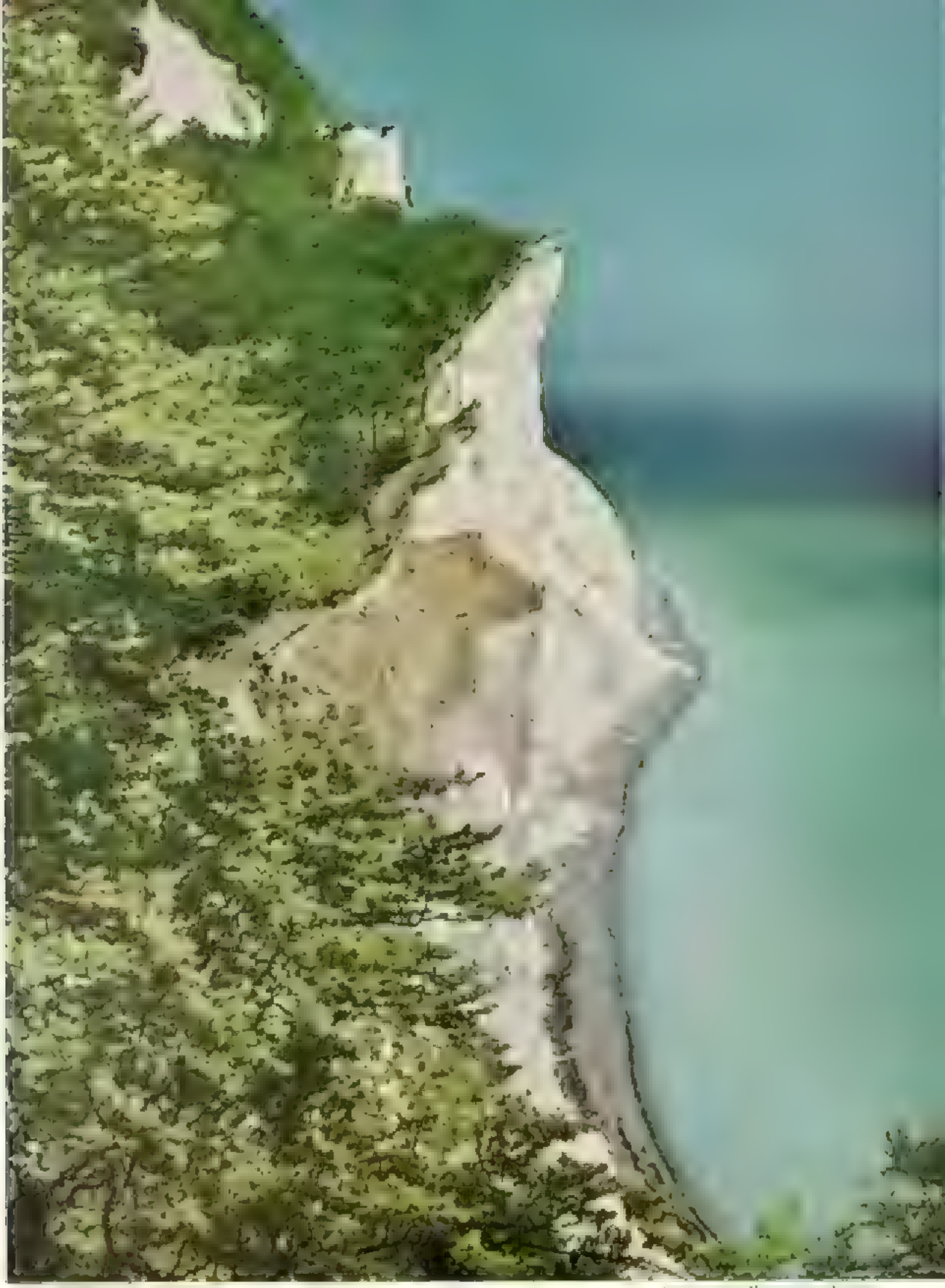
The fertile soil of Als is literally filled with the dust of the past, for over 3,000 prehistoric graves have been counted on the island.

The green redoubts of Dybbøl, so bitterly contested when Denmark lost Slesvig to Germany in the 1860's, are now a national park and to the Danes a sacred spot.

The Mill itself, twice shot to pieces and restored, still fulfils its function. On its flag post the Danish flag flew throughout the recent occupation. As for the ornate obelisk which Germany raised on the top of the hill to commemorate her victory in 1864, it is today a heap of rubble, destroyed by Danish saboteurs.

Als was a happy epilogue to our tour of 2,000 miles through Europe's oldest kingdom. Next morning we took the ferry which landed us again in lovely Faaborg. Recrossing the Great Belt that afternoon, we reached Copenhagen the same evening.

We celebrated our return by a visit to the Lion, a memorial to Danish soldiers killed in the War of 1848. Restored to his native land in 1945 by Allied might after long exile in Germany, he looked upon us, we thought, with a friendly eye.



Like a Stepping Prow, Mons Klint Looks Forward to a Martian Sea

[illegible]

A Visit to Grandpa's Is Like a Call on the Seven Dwarfs

[illegible]

Children in Ears and: > the Odense Home of Hans Andersen

[illegible]

As Green as Heaven's Golden Avenue Is a Leading Alley

[illegible]

[illegible]

Denied Cloud Sends Across the Sky; Windmill Sails Swirl Like Propeller Blades

[illegible]

A Helsinger Cowboy Spans the Ocean and with Their Eyes: Ahead Lies Sweden

If Marion Hears No Yell from Junior, She Knows He's Safe in His Trucks

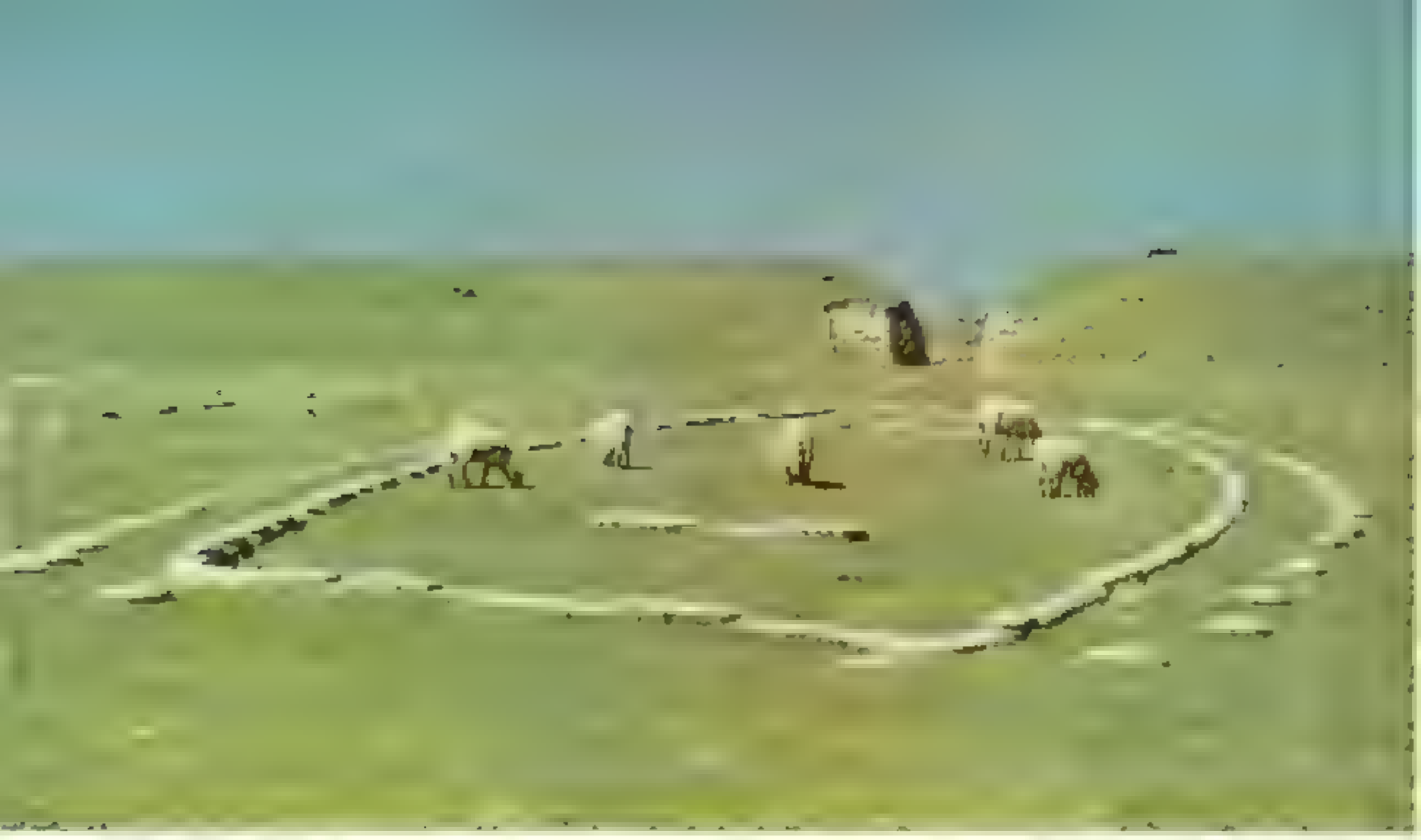
An Angel's Sun Lights God's Water Temple in Normandy

Author and Sister Rest Beside an Road Marker

[illegible]

Young Denmark Sits at Kansas Oldest Dated House

[illegible]



Sheep at Trelleborg Browse on History in the Ruins of a Viking Camp

Harald, Grandsire of England's King Canute, Set Up Jelling's Rune Stones [illegible]

History Repeats in Old Natchez

By William H. Nicholas

With illustrations by National Geographic Photographer Maynard R. Orlady

CHAMPAGNE corks are popping back to the durable ante-bellum manorial mansions of Natchez, Mississippi.

Industrial plants and oil, pumped from four fields in Adams County, are spreading wealth in Natchez for the first time since the War Between the States and later the boll weevil ended the reign of its fabulous cotton barons.

Cotton supplied the gold which built the "more stately mansions" on those high bluffs overlooking the Mississippi River (page 190). In pre-Civil War days wealthy planters vied with each other over the size of their spacious houses. They went to Europe to find carved marble mantels, huge gold-leaf mirrors, rosewood furniture, heavy brocade drapes, fine statuary, and other costly furnishings with which to adorn them.

Golden Age of Natchez

Plantation owners cantered into Natchez on spirited horses. Their dazzling ladies were drawn in fine carriages, with liveried outriders and appointments of gold and silver (page 183). Glittering balls testified to the general affluence.

Then came reverses. The straitened owners withdrew into their big houses, and Natchez withdrew into itself. A grim struggle for survival began, to last for the better part of a century.

Paint peeled from the walls of the once-resplendent dwellings and from the once-shining pillars and columns. Costly drapes molded, hand-blocked French wallpaper cracked.

Today, with new wealth, mansions have perked up again. New paint and new plaster have worked wonders.

In the last few years half a dozen houses, long ago abandoned in disrepair, have been restored. Once more they stand proudly alongside those which more successfully withstood the lean days.

Restoration of one of the oldest plantation houses recently was marked by a huge barbecue. Two thousand people attended. Pine-torch flares held by Negro boys lighted the lane to the mansion. Bands played.

Formal receptions signalized the reopening of two other big houses. Long-darkened chandeliers in the huge drawing rooms were lighted. Toddy and champagne appeared in abundance.

"Like old times," sighed more than one Natchezan.

Almost the first thing I saw as I entered the outskirts of the old town one sunny Sunday afternoon was a storage yard jammed with pipe and other oil field equipment.

Industry Brings New Wealth

Later I walked across the expansive floor of the huge $7,000,000 insulating board plant being rushed to completion by Johns-Manville Corporation. I visited the Armstrong Tire and Rubber Company where 700 men were hard at work. I passed a clothing factory where machines clicked busily. Here were sources of the new wealth.*

I strolled to the plaza at the edge of the river bluff, rising 200 feet above the Mississippi, and looked across the broad expanse of water to the Louisiana lowlands. For untold years before the white men came this area was the home of the Natchez Indians.

In 1716 Jean Baptiste le Moyne, Sieur de Bienville, the French colonizer, clambered up the bluff to establish a stockade, which he named Fort Rosalie. But 13 years later the Indians massacred the settlement's entire population.

At the close of the French and Indian War British redcoats took over Fort Rosalie. Within 10 years some 15 English families occupied large grants of land about the settlement.

During the Revolution a third flag flew over Natchez—the flag of Spain. While England was occupied along the Atlantic seaboard, the Spaniards moved in the back door and took the town. Not until 19 years later was the young United States able to gain possession.

Near where I stood at the edge of the river bluff was the southwest terminus of the historic Natchez Trace, wilderness trail which in pioneer days linked Natchez and Nashville, Tennessee, 450 miles away.

Buffaloes Built Natchez Trace

Original builders of the Natchez Trace were buffaloes. On their way to salt licks or feeding grounds, year after year, their hoofs beat out trails through the wilderness. Several of these trails, when joined together by the Indians, led southwesterly from Nashville to the Mississippi. This rude road system provided

* See "Mexicans Come to Mississippi," by J. R. Middleton, National Geographic Magazine, September, 1953.

For 150 Years Bucket Ropes Grooved This Cistern's Rim

The tank is one of several on the grounds of Rosemont Plantation, home of the Natchez Trace (pages 194 and 197). They were kept filled by pipes from the old plantation mansion's spring.

communication among the Natchez, Choctaws, and Chickasaw tribes.

Now the Trace Andrew Jackson and his soldiers marched to and from the Battle of New Orleans. The Marquis de Lafayette, John James Audubon, Henry Clay, Jefferson Davis, Aaron Burr, Meriwether Lewis and Clark, Mark Twain, and many others, after returning from the wars, explored it.

He footmen and horsemen floated down the Ohio and Mississippi to New Orleans with their produce, sold both produce and boats there, and walked home over the Natchez Trace. They couldn't push their boats against the current that Mississippi current.

Soon the lonely trail became infested with bandits and outlaws who preyed upon the flatboatmen returning with well filled purses and belongings, with or without them.

When the coming of the steamboat the Trace fell into disuse. Now the Federal Government has begun to build a new Natchez Trace Parkway, to follow the route of the old road, for motorists. Its direct route will be the same as the old road, from Nashville, Tennessee, to the lower end of the Trace between Vicksburg and Baton Rouge, a century of use had cut into the Trace so deeply that it now lies in a sunken road, in some places far lower than the tree-covered banks on either side.

Natchez Homes Spell Romance

I saw other round-roofed Natchez which also had been worn down by the feet of the people who walked over them. Lafayette, Jefferson Davis, Aaron Burr, Mark Twain, and many others slept in them.

Is it the real story of Natchez, the story of its remarkable women, in which, with few exceptions, succeeding generations have lived more than a century, and in which some of their forebears, the Natchez settlers, in many now the mansions of Natchez, have lived since the days of the Spanish Dominate Month.

[illegible] represents [illegible] decades, and [illegible] with true Natchez hospitality [illegible] who appears. In March 1935 Natchez entertained more than [illegible] guests.

Taking the Axe on the Natchez Trace in the Style of a Vanished Day

[illegible]

Centuries-Old Silk-Damask Drapes Hung from Gold-Leaf Cornices at The Hunt

[illegible]

[illegible] Spanish-American Exposition [illegible] Garden Club [illegible]

[illegible]

Homes Recall Spanish Way of Life

[illegible]

These skeletons have been unearthed from the debris.

Natchez homes built between 1775 and 1800 reflect Spanish or Louisiana plantation influence, with high steps, low ceilings, iron grilles, wide iron balconies, or paved patios. They also recall the gay days of the Spanish governors, who brought to Natchez their gracious ways of life.

Part of Hope Farm, one of the earliest of these pleasant dwellings, was erected before 1775 and later was the home of Don Carlos de Grandpre, one of the Spanish rulers (page 198). I noted the building's hand-hewn cypress timbers, fastened with wooden pegs, all as sound today as when the house was built.

The old home was restored about 20 years ago by Mr. and Mrs. Balfour Miller. Among its exquisite furnishings, a crystal candlelight lamp suspended over the dining room table particularly caught my eye.

Mrs. Miller, a descendant of one of the town's oldest families, is the originator of the Natchez Pilgrimage. Skeptical Natchez businessmen considered it an impractical dream, but after the first tour they presented her with a loving cup.

Walls of fortlike thickness enclose The Elms, a graceful, pink stucco reminder of the Spanish era. Low ceilings in the original part of the house, built by a forgotten grandee about 1782, contrast strikingly with the high ceilings of an annex, erected 75 years later. The graceful wrought-iron staircase; wrought-iron lanterns, locks, and keys; and an old ivy-grown ruin of an arch in the azalea and camellia garden are other Spanish reminders.

Cupid Conquers Both Blue and Gray

The most romantic episode at The Elms goes back to Civil War days. Federal guards around the home were about to be removed. But Miss Nancy Thorndill, the young lady of the house, requested that one handsome young Union officer be permitted to remain because he was "such good company." Her maidenly request was granted; they fell in love and were married.

Mrs. Joseph B. Kellogg, the present mistress of The Elms, is a member of the sixth generation to live in the mellow old home.

Lacy iron galleries in honeysuckle and rose motifs grace the faded red-brick façade of Bontura, a Spanish Creole masterpiece. Built in the 1790's, it later came into possession of Don José Bontura, wealthy Portuguese tavern keeper and wine merchant.

Tradition says Mark Twain and Stephen Foster were entertained at Bontura. From its balconies eager spectators watched the epic steamboat race between the *Natchez* and the *Robert E. Lee* (page 187). But railroads and warehouses encroached on the mansion until it so declined that it was about to be condemned.

Now Bontura has been restored and once again can welcome guests with wine and music. On the drawing room floor of original cypress is spread an Aubusson rug of the 1830's.

On Ellicott's Hill stands Connelly's Tavern, built by a Frenchman or Spaniard before 1795 (page 206). Here a Quaker, Andrew Ellicott, first flew the Stars and Stripes over Natchez in defiance of the Spanish authorities. A ship's architect was responsible for the tavern's exquisite interior woodwork.

Tavern Scene of Burr's Conspiracy

Beneath the vaulted taproom ceiling Aaron Burr plotted with his confederates to set up a Southwestern nation. Burr was tried for treason at Washington, Mississippi, six miles east of Natchez. It is said that attendance at the trial was so great that court was held outdoors, beneath giant oaks that stand today on the edge of the campus of Jefferson College.

I saw copies of tavern rules from pioneer days. They insist that guests must remove their shoes before they retire; that no more than four men may occupy one bed. The management disclaimed responsibility if a guest robbed a sleeping companion.

Connelly's Tavern was almost a ruin when the Natchez Garden Club acquired it in 1936, restored it to its former state, and made it a club headquarters.

Airlie, home of the Ayres P. Merrill family, was erected by a Spanish grandee before 1790. Here silver gleams from massive mahogany sideboards; a French china set and pieces of rare crystal and other old glass grace the dining room table.

Cherokee, before which American soldiers encamped when they came in 1798 to claim Natchez for the United States; Linden, with its spacious galleries, home of the Conner family of Natchez for five generations (page 202); and a tumbled row of one-story buildings in the old courthouse square, known as Lawyers' Row, also belong to the Spanish period.

Not far from Natchez stands another famous early mansion—sturdy Springfield, where Andrew Jackson courted and married his beloved Rachel.

Concord, once the home of the Spanish governors, also was a Natchez landmark. But some few years ago it was destroyed by fire and now all that is left of this center of the

Crystal Pendants Gleam in Dunwoody's Modern Chandelier

[illegible]

[illegible]

Richmond—Three Houses in One

[illegible]

[illegible]

[illegible] in 1851. The piano was

From Power's Gallery Onlookers Saw the *Natchez* Race the *Robert E. Lee*

[illegible] New Orleans [illegible] *Robert E. Lee* [illegible] *Natchez* [illegible]

bought to the First Methodist Church, where the Natchezians paid $5.00 to hear Jenny Lind [illegible] accompaniment.

[illegible] the old [illegible] of the house, with other [illegible] [illegible]

Horses Tied with Silver Chains

[illegible]

The Natchez country, in its heyday, was [illegible] more millionaires than any other community in America except New York. One [illegible] married and [illegible] lettered each [illegible] in a silver plate and [illegible]

Among the [illegible] of the many interesting plantation homes [illegible] on the old Natchez Trace [illegible] and [illegible] large [illegible] walls.

[illegible] family [illegible] before the War of 1812 [illegible] with a different [illegible]

of bird or flower on each piece (page 201). Audubon spent several years of his early married life in and near Natchez, teaching art and music, and doing much painting.

"Until the pilgrims came along," Mrs. Melchior Beltzhoover told me, "we in Natchez did not realize the value of many of our family possessions. I know when I was a girl the most remarkable thing about this set of china to our family was the fact that it had been sent to France to be fired, since no kiln was available here. The fact that Audubon had painted it made little impression."

One a number of out-of-state newspapermen were visiting Natchez. At Green Leaves they were inspecting the Audubon service spread out on the dining room table.

One of their escorts, in a moment of preoccupation, picked up one of the plates and casually tossed it into the air, then just as casually caught it. The alarmed director of the group told him that if he touched another piece of that priceless set, he would be forcibly ejected. The plate-tosser was terribly embarrassed.

But Mrs. Beltzhoover, who had observed the incident without the flicker of an eyelash, comforted him and gave him to believe that the Beltzhoover family spent its spare time tossing Audubon plates into the air. Natchez women are like that.

Accident Revealed Silver Hardware

While rambling Twin Oaks, built on a Spanish land grant in 1818, was being restored a few years ago one of the workmen accidentally dropped a bit of gold on a piece of hardware. He thus unwittingly brought to light one of the distinctive features of the old home—locks, hinges, escutcheons, rosettes, all painted black by someone in the past, actually were of Sheffield silver!

Elmscourt (pages 186 and 191), with its portraits of thoroughbreds from the Surget stables in the ante-bellum days when Natchez had its own race track, was the family home of Vice Admiral Aaron Stanton (Tip) Merrill, Retired. He won the Navy Cross and the Legion of Merit for extraordinary heroism and outstanding services while commanding a South Pacific task force in the Guadalcanal and Bougainville campaigns.

Square-columned, dignified Monmouth, where lived General John A. Quitman, Mexican War hero; Mistletoe, delightful "Mississippi Planter" house; Elgin, whose graceful galleries are half hidden by huge oaks draped with Spanish moss; and The Briers, where Jefferson Davis wooed and won the lovely Varina Howell, are other beautiful early 19th-century plantation houses surrounding Natchez.

A combination of romance, religion, and business acumen account for two of the town's historic houses, Rosalie and The Parsonage.

A Parsonage for Wandering Ministers

When Peter Little, successful planter and financier, was in his late thirties, his friends Mr. and Mrs. Jacob Low, were stricken with yellow fever (often epidemic in early Natchez). Their 13-year-old daughter, Eliza, became his ward and Peter Little was named administrator of the Low estate.

He decided to send the girl to school in Maryland, but suggested that they be married just before her departure. Eliza agreed, and immediately after the ceremony she boarded a boat for New Orleans on her way to Maryland. When she returned several years later she became the mistress of Rosalie, the fine mansion her husband built for her near the site of the old French Fort Rosalie.

The couple lived together most happily, but Mrs. Little was consumed with religious zeal. She insisted on giving lodging to the itinerant Methodist ministers who stopped in Natchez on their way up or down the Mississippi River, and extending to all circuit riders the hospitality and comforts of Rosalie. The ministers received hot coffee at their bedsides in the morning, meals at any time convenient to them, horses to ride, and maids to attend their wives and children if they happened to be along.

Peter Little grew tired of these constant guests, so he built a spacious home across the street in which to entertain them. He called it The Parsonage.

Rosalie Restored by DAR

Rosalie, a Georgian mansion, has been restored by the Mississippi Daughters of the American Revolution as a national shrine. During the War Between the States it was headquarters for the Union general in command of the occupation forces.

The furnishings of Rosalie include massive canopied beds, red-flowered carpets, French china, and mahogany and rosewood drawing room furniture. The trim Parsonage has been the home of the Metcalfe family of Natchez for half a century.

Many echoes of the War Between the States linger on in the old town. Bayous which enclose classic Ravenna and its smiling gardens became secret passageways by which residents of Natchez smuggled food to the hard-pressed Confederate soldiers outside the town. The Burn, a sterling example of pure

Stanley Elkins Keeps Alive Traditions of Antebellum Plantation Days

Ohio River Overlooking the Mississippi at Natchez Bluff, Dames in Its Dress to Pass the Levee N°

From Belgium Came Lacy Innovations to Grace Thinscourt, Famous a Century Ago for Glittering "Balls of a Thousand Candles"

French Brocatels and Carved Rosewood Furniture Add Luster to the Drawing Rooms of Palatial Mansions

Lawrence Nash as Chapperon Sometimes Replaced the Glass Table in Melissa's Sitting Room With a Decorated Grape Crate

From the Fireplace of the Quarters Kitchen Come Savory Roasts for Gloucester's State Dinners

"Not For Her Manners" A Tea Urn Is Fired from a Kettle

Union Soldiers Stabled Horses in Montague's Drawing Room in the War Between the States

[illegible]

William Gloucester's Wedding Portrait Gave His Heart to Bess

Grandees Slept Here When Spain's Flag Flew over Natchez

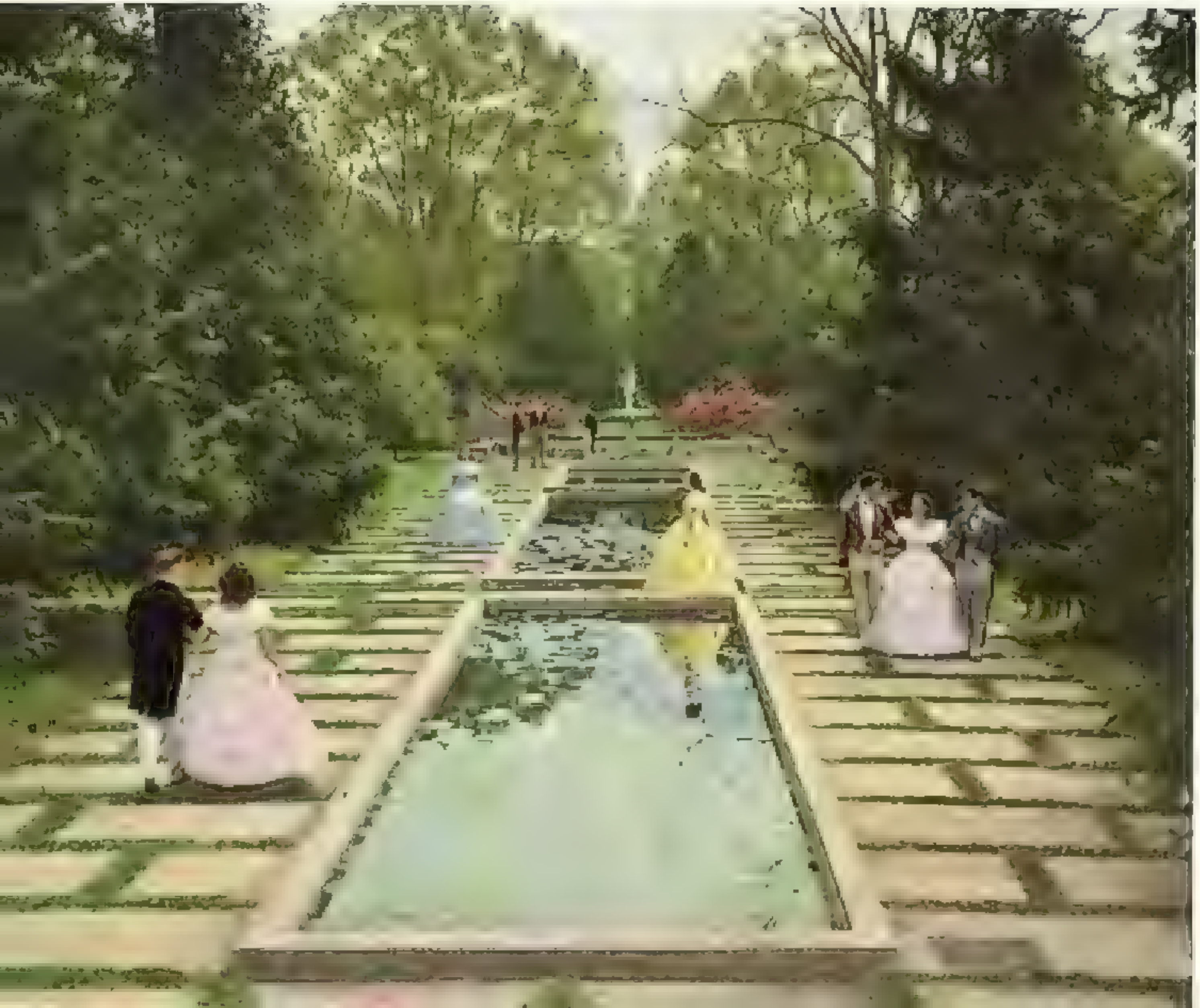
Furnishings Preserves French Wallpaper, Original Carpets

[illegible]

Swinging Parasols Sway in Alternating Breezes in Mississippi's "Gone Old South" [illegible]

Audubon Painted a Bird Design on Each Piece of His Porcelain Service

Moss-hung Oaks Shade
Gardens Flowered
Welcome Guests



Camellias and Azaleas Edge Montaigne's Formal Gardens

[illegible]

Antique's Ingeniously Balanced Spir[illegible] Staircase Seems to Hang in Mid-air

Greek architecture, surrounded by camellias and azalea gardens, was converted into a Federal hospital (page 184).

Monteigne Victim of Looters

Monteigne, classic home of Confederate General William T. Martin, suffered at the hands of troops who stabled their horses in its exquisite drawing rooms, destroyed costly furniture, and broke rare china and crystal. No sign of such ill treatment is visible in beautiful Monteigne today (pages 196 and 203).

Spacious Lansdowne, built by a slave owner of fabulous wealth, preserves its original furnishings—a priceless collection of museum pieces (page 199). The vast central hall is 93 feet long. Ornate bronze chandeliers once were lighted by gas from the private Lansdowne gas plant—before Natchez had its own. Original rose and white hand-blocked French wallpaper graces the parlor walls. Descendants of the original owners still live here.

Frequent guest of St. John Elliot, the builder of D'Evereux, was Henry Clay. Legend tells that once, when the Kentucky statesman was strolling on the grounds of this imposing mansion, a servant mistook him for an intruder and set a dog upon him, to the extreme embarrassment of all concerned.

D'Evereux, with its tall white columns, its wrought-iron balcony above the entrance doorway, and its setting among old, moss-festooned trees, has more than once been used by motion picture companies as an ideal Southern plantation mansion (page 189).

Graceful Longwith, with its colonnade of tall pillars, stands in a park of terraced lawns—another storybook plantation setting.

Melrose Intrigued Henry Ford

When the late Henry Ford visited Natchez, he was intrigued by the furnishings of Melrose, another mansion of the "golden age" (pages 192, 193, and 200). In perfect preservation are the costly original furnishings. Here Mr. Ford found items he had never seen before in his years of experience as a collector.

Over a mantel hangs Audubon's panoramic painting of Natchez. The naturalist had been commissioned to do the painting, but when it was completed the prospective purchaser had died. Audubon tried in vain to sell it, and finally left it in a store when he departed from the Natchez country. The painting eventually wandered to France, then was brought back to Natchez and acquired for Melrose.

The mansion to outdo all other mansions in town finally was built by Frederick Stanton, who made his fortune during the "golden age." He chartered a ship to bring building materials and furnishings from abroad for Stanton Hall.

The grounds, occupying a whole block, are enclosed by a handsome wrought-iron fence. The mansion's fluted Corinthian columns rise in a park of huge trees (page 207). Grilles of iron roses surround the galleries.

Ceilings soar to a height of 22½ feet. Drawing room and music room, thrown open, become a ballroom 72 feet long. Arches, hand carved in Italy, span the entrance hall and drawing room doorway. Huge bronze chandeliers, each with a different design, hang in the four rooms on the main floor. The one in the library has carved figures of French soldiers at Natchez, complete with their armor and weapons.

Off the vast central hall a recessed stairway rises three flights in elliptical curves. Elaborately carved white Carrara marble mantels frame the fireplaces.

But Stanton Hall was too big. A year after it was completed, in 1858, Stanton died. Then came the War Between the States, and its aftermath of deflation. Valued at $550,000, the home changed hands in 1870 for $7,000. Later it was sold again for less than the cost of the wrought-iron fence which surrounded its grounds. In 1940 the Pilgrimage Garden Club acquired the property as a headquarters and a club restoration project.

Split Pants Interrupt Tour

Although history and tradition surround the people of Natchez, their daily problems are similar to those everywhere else. For example:

The morning Mrs. William Feltus accompanied me to several homes, we halted our tour about noon to drive to the grade school, pick up her son Charles, aged 9, take him home, then find a bite of lunch.

As we drew up, Charles came running toward us, his sweater pulled about his waist and hanging downward like a skirt. Before his mother could introduce us, he exclaimed:

"Mother, something terrible happened."

"What was that, Charles?" Mrs. Feltus asked, prepared for anything.

"I split the seat of my pants!"

So we interrupted our schedule while Mrs. Feltus saw to it that Charles was properly clothed for the afternoon session.

Then there was the afternoon when Mrs. Bernard Wood was piloting me about in the new family car. We emerged from one house to discover that another car had backed into hers and had left a big dent in a fender. Mrs. Wood was preoccupied for the rest of the tour, but at home that evening she found, to her

Tenant Connelly's Tavern Old Glory Waved Defiance to Spanish Rule

[illegible]

[illegible] relief [illegible] could [illegible] the matter.

Again [illegible] Tenant [illegible] for [illegible] the second time. When a [illegible] Mrs. Homer H. Wallington [illegible] group of [illegible] to [illegible] so [illegible] too [illegible] the road had [illegible] [illegible] of the [illegible]

"Battle of the Hoop Skirts"

Little [illegible] problems growing out of [illegible] were responsible for the rise of divergent groups in the Natchez [illegible] during World War II. [illegible] open break [illegible] the "Pilgrimage [illegible]" [illegible] the "hoopsters" and the "splits" in [illegible] the "Battle of the Hoop Skirts."

Natchez [illegible] the [illegible] and brought thousands of extra visitors to the town to see what all the [illegible] was about. When World War II interrupted the pageant, [illegible] the time [illegible] were [illegible] [illegible] have been [illegible]. Now the [illegible] are [illegible] for Pilgrimage Month and [illegible] single tour.

Longwood's Strange "Arrested Development"

The story of Natchez would be incomplete without mention of Longwood, a house of a Southern planter which never was finished.

Dr. Haller Nutt, a scientist and a cotton grower, engaged Samuel Sloan, Philadelphia architect, to design and build a new mansion which he wanted to be distinctive and [illegible]. The building was to be of four stories [illegible] elevated, surrounding [illegible] a [illegible] dome. [illegible] were [illegible] in the [illegible] and were paid [illegible] *Godey's Lady's Book*.

Workmen came from Pennsylvania to add [illegible]

Dance Belles' Hoop Skirts Swish Again in Majestic Stanton Hall's Doorway

[illegible]

Unfinished Longwood, a Planter's Dream Dashed by the War Between the States

[illegible]

Longwood [illegible] done [illegible] work. The exterior octagonal walls [illegible] were completed. [illegible] the cupola [illegible] were in place. Ships on the high seas were bringing interior [illegible] ornamental [illegible] mantels, [illegible] and costly furnishings from Europe. Scaffolding for the [illegible] had been erected. Painters were busy.

Artisans Answer Call to Colors

Then came the War Between the States. The workers from Pennsylvania walked off the job. Ships with building materials were seized by the blockade. Orders abroad for some of the furnishings were cancelled. Dr. Nutt died before the war ended.

To this day only the basement apartment has been finished. [illegible] descendants of the Nutt family have lived [illegible] amid the old furnishings which graced the former home of Longwood—rosewood chairs, marble-topped tables, a Swiss music box, carved and upholstered sofas, [illegible] and gold-leaf mirrors.

I climbed upstairs. Here everything was in the same state of [illegible] as when the workmen left to join the Union Army. Scaffolding stood alongside the uncompleted walls. Brushes lay in dried-up paint buckets covered with dust. [illegible] windows [illegible] gaping [illegible]. Empty niches, where statues were to have stood, looked [illegible] and forlorn.

Outside, in front of the house, a [illegible] marked the place where architects' [illegible]. [illegible] directions.

[illegible] Natchezians [illegible] ornate [illegible] skeleton. Today [illegible] pilgrims stare at it in open-mouthed wonder.

Oasis-hopping in the Sahara

By Maynard Owen Williams

With Illustrations from Photographs by the Author

BRIGHT-EYED [illegible] and the docks at Marseille as we boarded a ship that would take us from a Europe blanketed in snow and suffering.

For many families of motor trekkers, off on a rocky road to adventure, this was the last rest before the sterile, sunny Sahara sands.

Across the once impassable desert scores of emigrants from crowded Britain were lurching in war-worn army trucks toward new homes in faraway South Africa. These modern pioneers were traveling across France and the entire length of Africa—an overland trip of some 6,000 miles.

One truck after another was lifted into the hold of the *Ville d'Oran*, back in service after a heroic war career as an auxiliary off Norway. Race horses were swung aboard in their traveling stalls. The National Geographic Society colors on my car attracted attention.

Oil for Algiers—and Beyond

As my wife and I made port at Algiers (Alger) after a 22-hour crossing, a cold drizzle masked the skeleton-white Kasba, nerve hub-side quarter in the heart of the Algerian capital (page 223).

In swank shops of this "Paris of North Africa" luxury goods were displayed to tempt the long-gowned Algerian or disguise a lack of staples. Skyscrapers were dwarfed by confusing hills. In the gardens of Mustapha Supérieur, the newer aristocratic quarter, Easter lilies uncurled their creamy cornucopias.

One day at dawn a shiny aluminum-colored bus, labeled with exotic names, came to carry us off for two weeks of oasis-hopping across the desert. With a desert-wise driver at the wheel, this would be safer than driving The Society's car.

As the morning sun broke through the clouds, the hills behind Algiers were brilliant with verdure and red earth. Along the hilltops, tinted villas squatted comfortably above tot fields. Mules and horses plowed furrows between the close-trimmed vineyards.

Behind us lay the Mediterranean's blue. Ahead spread the rich plain of the Mitidja, where vineyards slope down to green-tufted orange groves. From the fertile soil of this onetime sea floor comes a profusion of early vegetables. Huge truckloads of hand-washed carrots roared along toward the docks and London's vegetable market at Covent Garden.

After passing through miles of fertile fields transformed from malarial swamps, we came to Boufarik, with its proud monument to a hundred years of French colonial agriculture (page 211).

Near Blida descendants of immigrants from the old Spanish province of Andalusia had directed water to the fields by methods dating back to Babylon, when agriculture was young.

Our bus now headed toward the misty slopes of the chilly Atlas. Leaving the rich and smiling plain, it corkscrewed up the Gorges de la Chiffa (map, page 222).

Monkeys Answer Chow Call

As we stopped to stretch our legs at a roadside restaurant, an Algerian beat a carrot on a pan. Down from the rocks for food came monkey after monkey. One of our companions photographed "beauty and the beast" as his wife offered a monkey a cube of strictly rationed sugar. American GIs chased the simians up the rocky cliffs (page 217).

Hurdling a 3,300-foot pass in cold fog, we coasted down toward Medéa, whose climate and fruit trees are like those of Europe. Medéa's heady white wine provided tough competition for French wine growers before wine was so scarce that it had to be rationed.

By lunchtime, at Berrouaghia, we had covered less than a third of the day's itinerary. Two ranges of the Atlas Mountains already separated us from the Mediterranean. The rain and mist were gone. Camels and goats surrounded our cars. We were in another world.

Away to the south were the Mountains of the Ouled Naïl, professional dancing beauties who used to drape their necks with gold. Now they have discovered that a good apartment house is a better-paying investment than bright baubles (Plate XVI).

Farther west is the Djebel Amour. Its name comes not from "love" but from the Beni Amour tribe.

To the descendants of Antar, hero of Arab poetry, their rocky hills, blessed with little fountains, seem desert set fairlands.

After 200 miles, the railway quits at Djelfa. Trucks take over much of the traffic formerly monopolized by the dromedary.

Long after dark, with a real chill in the dry air, we stopped at Laghouat, beneath the

Desert Herbs and Fagots Dot Ghardaïa's Market Place Below the Hillside Town

Mzabis (Mozabites) [illegible]

[illegible] "Vagabond" [illegible] of a caravanserai, where camel caravans gave way to grinding gears.

As we breakfasted, a few women shuffled through the town. Across the open [illegible], flat-topped mosques and dwellings crowned a rocky ridge. [illegible] the green-topped [illegible] minaret [illegible] the [illegible] of Ghardaïa—which gave the oasis its name.

Toward [illegible] a [illegible] rising above the [illegible] [illegible] desert trails from far and near. In [illegible] there [illegible] camels and [illegible]. A [illegible] "camel" [illegible] of [illegible] was organized by a Detroit corporation lawyer.

Before [illegible] start for Ghardaïa I [illegible] [illegible] the [illegible]. Our [illegible] [illegible] [illegible] a [illegible] [illegible] [illegible] and spotless [illegible] [illegible] afternoon [illegible] [illegible]. While [illegible] [illegible] with a [illegible] [illegible] [illegible] [illegible] [illegible] at the [illegible] [illegible].

"I [illegible] [illegible] [illegible]," he explained.

Where the Desert Begins

[illegible] once [illegible] between North African [illegible] and Central Africa. [illegible] [illegible] the [illegible] to the desert.

In one day's [illegible] with each [illegible] to [illegible] covering a [illegible] trip we en-

Nomad Sheep Play Heads and Tails in the Boufarik Market

[illegible]

scattered little oases. Two principal types of desert, [illegible] and the [illegible]. There were [illegible] the Sahara [illegible] a rest- [illegible] map which [illegible] [illegible] at the [illegible] of [illegible] [illegible] Arab [illegible] perhaps [illegible] would recognize [illegible] land.

[illegible] with the grass of [illegible] [illegible] of the [illegible] Here and there low [illegible] water. Now that the [illegible] was gone, the earth [illegible] tiny green [illegible]

Chebka means "net," and the [illegible] can well see why. The rocky brown plateau is [illegible] A [illegible] might [illegible] these [illegible] for hours without finding enough [illegible] which [illegible] for [illegible] in [illegible]

A [illegible] Even [illegible] has [illegible] How [illegible] its [illegible]

At the [illegible] a small [illegible] truck. Its owner, an [illegible]

Belton, explained: "My pal broke a spring and went back. But we haven't got too much petrol, so we're waiting for him."

Here one is filled with admiration for these adventurous desert men who make a living from rather wastes where lesser men would die. The cheery smile of a lone laborer repairing the trail seems heroic.

The Mozabites Are Mohammedan Heretics

Topping a rocky ridge, we looked down upon patchwork squares of vivid green. We had arrived at Berriane, monument to the industry of the Mzabis, or Mozabites, Mohammedan heretics who have won a proud position in the Moslem world (Plate VII).

Nearly twelve centuries ago, a Persian religious leader had his capital in a pleasant region between mountain and steppe at Tiaret. His Mzabi followers were known to the shores of Tripoli.

When a few thousand of them emigrated from Ouargla to Ghardaia, they bored through limestone to find water and so made it one of the most populous and prosperous of Saharan oases (Plate I).

Beside us, across the desert, had marched the tall towers of high-tension lines carrying electricity to Ghardaia. Here we still saw donkeys, plodding at the ends of ropes, hauling from wells the bloated goatskins which from time immemorial have made the desert bloom. But the squeal of the water hoists is now giving way to the soft whir of a powerful turbine pump made by Layne & Bowler, Inc., in Memphis, Tennessee.

Emancipated thus from painful digging and the ceaseless come-and-go of the water pit, Mzabis quit [illegible] in the sun, playing swift games of checkers or slapping down aluminum dominoes (Plate X).

Around the main market place male seamstresses sew the long gowns gracefully worn by Algerian men (page 210).

After a lunch of couscous—of which there are as many varieties as there are of curry—we roamed the narrow, mud-walled streets, laughing-eyed girls in Kodachrome-teasing colors dashed for cover.

Our second day in Ghardaia we watched an Arab wedding procession. Dancing men brandished long muzzle-loaders; fired volleys at the rough feet of apathetic camels. Two soft-faced camels of the caravan carried tent-like litters.

From one of these portable harem enclosures protruded a youthful ankle circled in heavy silver and a small foot in a scarlet sandal.

The Arab and Mozabite crowd poured down an empty torrent bed and stretched their bright ribbon of color along the tawny hills. We photographers stumbled along, shooting as we ran (Plates II and III).

Dusty and sweaty, we rejoined our friends at the holy city of Beni Isguen, within whose walls no man may smoke nor any foreigner pass the night.

Nowhere along our route did we find such fine specimens of male dignity. Four men out of ten were strikingly handsome.

As twilight comes on, these industrious citizens, spotlessly garbed, squat in the town square while strolling salesmen carry on an auction.

The bearded Mzabi does not go to market. Like a comfortable American, reading his ads, he sits still and lets the market come to him. No patter talk disturbs the bargaining. The auctioneer parades his priceless or tawdry stuffs back and forth, picking up a bid here and there until the deal is closed.

As we climbed to Beni Isguen's high tower, dark eyes of women and girls peered over the edges of the mud roofs. From the tower we looked down across a chaotic tumble of rocks to the Mozabite villages and broad expanses of date palms on the valley floor.

Donkeys water the bulbous but stringy roots of the palms. As they tread the slanting runways, the length of the rope indicates the height of the water in the well.

When the far end of the path is blocked off and the well ropes are shortened, one knows there is water for all and good crops are assured (Plate VI).

At dawn on our fourth day we collected new evidence on the question, "What is desert?" Climbing out of Ghardaia's fruitful valley, we worked across the barbarous Chebka. Gradually rock gave way to gravel and an occasional stretch of sand.

In one such stretch the young English-speaking driver of a heavily loaded truck was repairing a tire. The crowd of long-gowned natives had piled off, started a fire, and were having small glasses of mint tea sticky-sweet but refreshing.

After the tire pumpers had rolled away and we started to follow suit, one of our back wheels spun in the sand.

Desert Bus Carries Emergency Tracks

Extending across our bumpers we carried two stout pipes, seven or eight feet long. When the tires bog down in sand, one of these tubes is laid in front of each rear wheel (page 224).

First, the double tires kick the tube deep into the sand. Then the vehicle moves, perhaps one foot, perhaps four.

A Tapering Minaret, Exclamation Point in the Sky, Calls Allah's Attention to Ghardaia

[illegible] Islam. [illegible] and parse [illegible] desert [illegible] on more it flower

An Arab Bridal Party Pours Like a Flood down the Dry Stream Bed Facing Melian, a Hill-top Citadel of the Mozabites

Once every [illegible] years flash floods flush the Mozab wadi. Sudden [illegible] torrents have taken many [illegible]

Continued from the Mob, the Bridal Party Rides Caparisoned Camels

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

IV

In the Grim Sahara, Where Delay May Mean Death, a Good Samaritan Bus Stops to Aid a Punctured Fellow Traveler

The [illegible] of money tripped for [illegible] as water [illegible] took [illegible] work [illegible]

Tinkling Place Names Sound Adventure's Sahara Call

A few decades ago only camels crossed the Sahara. In 1922-24 the Citroën-Haardt expeditions became the first motorized crossing. Today the jetliners open the desert's alluring heart to any traveler with the price. Harried sun lovers think nothing of flying in from Paris.

The African Societe of Tropical Transports operates a thrice-weekly service on Air Afrique's Algiers-Fort Lamy line, the longest automobile transport route on earth. Within a few hours its passengers travel a distance that used to take a season's toil. By day they survey the scenery from comfortable chairs; nights are spent in modern hotels. For reasons made plain by any thermometer, they travel in winter, never in summer.

El Golea, where this tiny station was pictured, appears out of the forbidding waste as an oasis of palms. Palm, citrus, cypress, pine and eucalyptus trees relight the spirits. Roses and strawberries give him a taste of home.

No wonder Arabs call El Golea "the garden-in-rest."

Many a Dingey on Guarding Devotes a Lifetime to Treading the 150 Feet Between Well (Right) and Runway's End

[illegible] The wind has always had and [illegible] come

Bangled Nomad and Turbaned Mozabite Typify Algeria's Racial Complex

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Tumbled Ruins of El Golea's Citadel Look Down on a Grove of Green in a Sea of Sand

This time, at the very first trial, we discovered why the heavy bus, with its 90 horsepower (American rating) motor, had bogged down. While we had sympathized with the truck driver, many miles from the nearest power-driven tire pump, one of our own tires had been flat (Plate IV).

Our one Arab passenger threw aside his heavy *burnoose* and went to work. At lunch that day he greatly improved our picnic meal by sharing his own broad sheets of Arab bread.

Getting out of the sand wallow was not simple. When the bus was jacked up and the punctured tire lifted from its deep depression, the sand flowed out from under the jack, the bus settled down for a long rest and passengers began to tell how delightful it is to travel by plane.

Aside from jack and tire tools, the chief utensil for desert work is a short-handled, sand-polished hoe, more than a foot wide. Wielding this sand scoop was Mbarak, an ebon chauffeur's assistant, whose light-skinned wife back home in El Goléa had just given birth to a baby boy.

"I'm a black son of the White Fathers," laughed our jolly blackamoor, and a better testimonial to the character building of self-sacrificing missionaries would be hard to find.

Not once did Norbert Ballin, our Algerian chauffeur, raise his voice. For four hours he and his dark-skinned helper crawled and dug, twisted the unruly tail of the heavy jack, or swept back the sand sea with the ineffectual hoe.

It was long after dark when we rolled into El Goléa. But Mbarak, nicknamed "Ali Baba" in cordial admiration, had won his spurs. However tired and hungry, all of us were delighted to stop long enough for this home-town boy to see his new baby and proud wife.

Modern Covered Wagons Roll On

Outside the oasis we had passed British lorries from whose dark interiors tousled children peered into the African night. Before dinner was over they lumbered in, another long day behind them in their trek toward South Africa.

Stout fellows, these tired refugees slept a few hours in their stuffy cars, then shoved on. Theirs was the same fixity of purpose that carried our forefathers in covered wagons across a continent.

We spent three days in El Goléa, all of whose sights could have been viewed in one cool morning. Yet I do not recall a dull moment (Plates VIII and IX).

Twice a day a long-gowned Chaamba paddled us about on leisurely saunters whose attractions might be the pink of fruit blossoms against a funereal cypress hedge, or the splash of crystal water for mud-walled gardens where lemon and orange glowed.

On one side of El Goléa stretches a landless airfield, its only improvements a wind sock, fueling strip, and tumble-down warehouse drifted with sand.

On the other side rises the deserted hill town. The palm-trunk beams of its mud-brick houses have tumbled in; its crumbled dwellings clutter the narrow lanes. But from the wide platform at its top we enjoyed a splendid picture of the life-giving miracle that 15 artesian wells can work in an otherwise sterile expanse.

Only 26 years ago the Sahara had never been crossed by car.* Now a trickle of motor traffic flows back and forth across the desert from October to April. On the wall of a "last chance" filling station near our hotel were lists of provocative names (Plate V).

As casually as if the routes led to Boston or Versailles, we read such names as Fort Lamy or Tombouctou, the land of a legendary cassowary whose desire to "eat a missionary, blood and bones and hymnbook too," was part of our childish lore about "cannibal land."

We yearned to continue our travels to the Sudan. But this True El Golea was as far as we were to journey toward the Southern Cross.

Looking back, we realize how far removed El Goléan customs are from our normal life. For example, we remember a dusky courtesan pouring tea, with a eunuch to pass it.

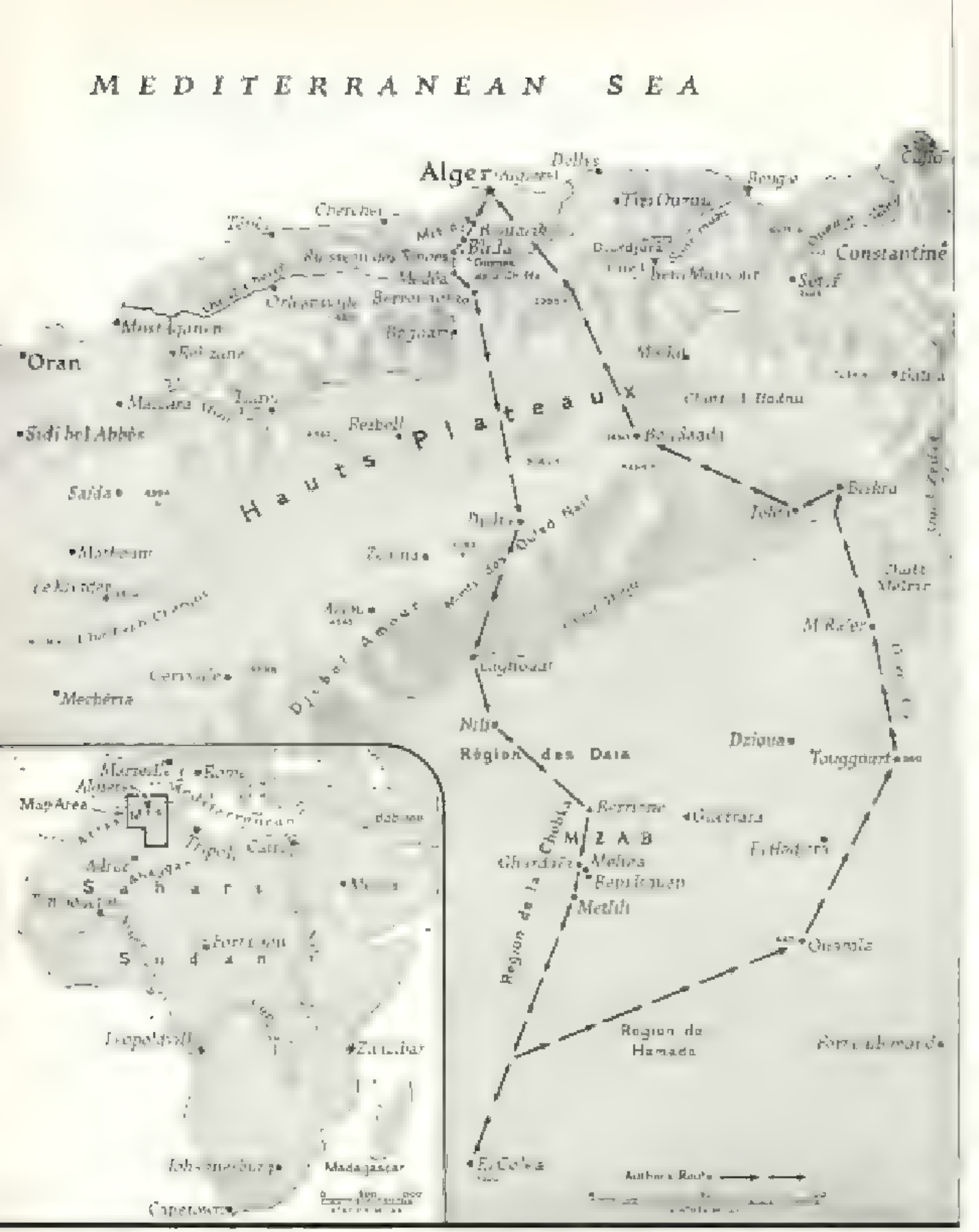
As we strolled back from a jaunt, she stood at her doorway, showing fine teeth in a professionally pleasant smile. Since Saharan picture subjects are usually male, my fellow photographer wished to photograph her.

"All right," she said, including our whole party in the invitation, "drop in this afternoon for tea."

Seated on bright rugs within the mud-walled room, we watched her pour a lavish stream of precious sugar into the pot, mixing the beverage by pouring it back and forth. Aromatic mint was added at the last moment before the wrinkled eunuch, arrayed in feminine finery, passed the drinks with self-conscious dignity.

"Never for a moment did she lose her self-possession or charm," concurred the French, Algerian, and American halves of our party.

* See "Conquest of the Sahara by the Automobile," National Geographic Magazine, January, 1924.



Sahara's Women Warrior Tuareg Nomads from Gadly France and Rémy Aguers

On a scheduled bus line the author crossed the Atlas Mountains and "hopped" from oases to [illegible] through [illegible] to the Sahara [illegible] Northern Constantine. [illegible] with the automobile [illegible] Motor trips from [illegible] drove The Society's car from Algiers to Denmark

Mijers' Kasba, Publicized by Charles Boyer and Hedy Lamarr, Was Out of Bounds to GI's

[illegible]

When a Desert Bus Gets Stuck in the Sand, It Walks Tiptoeps Along Such a Tube

[illegible] When [illegible] to remove a tire, sand may flow out from under the [illegible]

[illegible]

[illegible]

As we [illegible] Mr. Baron [illegible] up with [illegible] well [illegible]

[illegible] for [illegible] and [illegible] explanation [illegible]

Spiritual Oases in the Desert

Near the Saharan sands there also are Christian oases—churches, orphanages, and schools—administered by the White Fathers and White Sisters who [illegible] order of [illegible] [illegible] come from. My father [illegible] Moreover [illegible]

[illegible] people [illegible] Al Goura, where [illegible] be transported [illegible] who [illegible] the [illegible]

[illegible] Al [illegible]

"Now," he replied, "but are we not all children of [illegible]?"

Near El Goura is the first Christian church

Even While Saying Farewell to "Ali Baba's" Guests, Chamba Womenfolk Keep Their Fingers Busy at Homely Tasks

[illegible] Bou[illegible] Ferkessedougou, but a [illegible] for knitting

[illegible] Solar [illegible] in 1905. Close beside it under an [illegible], is the resting place of Père de Foucauld. His secret remains in the Vincent where [illegible] lives he lived with the Tuareg [illegible] struck him down.

[illegible] which the Vicomte Charles [illegible] Foucauld set himself was collecting the [illegible] of war and love which the young [illegible] their [illegible] desert wind [illegible] But the tribal nobles, perched on swift camels, are the lords of the desert.

On the block over De Foucauld's grave are the words, "I want to preach the Gospel all my life." And preach it he did, but [illegible] where a fanatic murdered [illegible] of [illegible]

Desert Dangers Include Drowning!

We headed north again along a not so familiar trail. Here and there it is so plainly marked and so well paved that it might be called a road. But at times on the shifting sand the tracks of less formal track giving way to [illegible] where each driver has set out for himself to cross a crest or round a soft spot in the sand.

"Beware of old [illegible] Don't follow

[illegible]

Such Well-like Manholes Mark the Course of a Thousand Miles of Water Tunnels

[illegible] the [illegible] underground water. [illegible] [illegible]

the size of telephone wires. If you must spend the night [illegible] valley, [illegible] "Start [illegible]. Carry [illegible] of everything!"

While such [illegible] the [illegible] on his way. [illegible] at the [illegible] wedding [illegible] was glad I had left the [illegible] car in an Algiers garage.

[illegible] a weedy acre [illegible] all [illegible] illustration we came to the *Hirondelle*. [illegible] and a green [illegible] across [illegible].

Almost [illegible] Ouargla we [illegible]. But [illegible] down pipe [illegible] we [illegible] for good.

Such [illegible] and [illegible] of all who [illegible] these [illegible] short cuts from the snowy Atlas to [illegible] steamy Niger, [illegible] through [illegible] we felt that [illegible].

After El Golea's modest charm, the European section of Ouargla seemed [illegible]. [illegible] we passed [illegible] which our [illegible] and [illegible].

While [illegible] is [illegible] contrasted with the old [illegible] crowded with dwellers [illegible] and [illegible] Fort [illegible]. When I saw [illegible] on the windows and [illegible] it [illegible]. The new [illegible] with [illegible] of [illegible] who [illegible] the [illegible] and [illegible].

[illegible] been the [illegible] with American [illegible] his [illegible] my wife and I had wandered about desert towns [illegible] with [illegible]

GIs, Chasing Monkeys in the Ruisseau des Singes, Dislodged Rocks as Big as Footballs

[illegible]

[illegible] of [illegible]. But is [illegible]

There's [illegible] Tunnell [illegible] Chasing Monkeys [illegible] Ivan Nelson Bulmer [illegible] the early stages of [illegible] the Sahara.

Tarred Roads Tunning the Sahara

One of these [illegible] roads in the Ivoirian Mountains [illegible] Gallia Sahara' which [illegible] of the [illegible] Hundreds [illegible] of the world.*

Between Ouargla and Touggourt the black-[illegible] road [illegible] for [illegible] a [illegible] Not [illegible] pure personal [illegible]

When [illegible] road [illegible] spilled [illegible] dotted [illegible]

Now Touggourt the road deteriorates. However [illegible] in a [illegible] to [illegible] which highways will be [illegible] Sahara when [illegible]

* [illegible] Mediterranean [illegible] Sahara [illegible] November [illegible] and [illegible] Nazi [illegible] such as Maynard Owen Williams [illegible] Middle East.

for the United States. Probably only one mile in five needs actual paving, but improvement of the bad stretches would facilitate through travel.

From Touggourt my former chiefs, Haardt and Audouin-Dubreuil, started on December 17, 1922, for their first crossing of the Sahara by car, arriving at Tombouctou on January 7, 1924.

Inching our way across Asia nine years later, we had often compared the great wastes of Asia with those of Africa. Not all agree upon what is the world's largest desert. First choice is the Sahara, which covers nearly half of the world's second largest continent; but oasis and rock ridge, mountain and salt Lake political boundary and traditional route divide the Sahara's vast barren areas. Central Asia's combined wastelands may rival the Sahara. None, however, has so awe-inspiring a name.

Throughout the trip we found the hotels better than we had hoped. But our welcome to Touggourt took the cake.

The names of our passengers had been phoned ahead, and someone at Touggourt had connected my name with a Citroën expedition. As we swung into the gardens of the Hotel Transatlantique, the Stars and Stripes and the Belgian and French tricolors waved a greeting.

Suddenly I realized that the American flag, so far from home, was honoring a National Geographic Society reporter and his wife. Our big room and bath somehow assumed palatial proportions, and the table around which we ate, drank, and were merry was a festal board indeed.

In the lobby were some giant specimens of gypsum crystals known as "roses of the desert," 3 to 4 soft petals, countless keen-edged scallops form into petrified fond bouquets weighing 50 pounds apiece.

Bumping north toward Biskra, we came to a 1,000-foot railway bridge across the Djedi. Its rocky river bed drains a tremendous area and is subject to infrequent floods which sweep it like the Hangchow bore.

So crowded was the motor trail that we almost bogged down, close to the tennis courts, race track, and gambling casino of Biskra. Tires snarled at gears, and one of our companions muttered a Gallic equivalent of "There oughta be a law!"

According to geologists, the low way we had followed from Touggourt was once a river valley, comparable with that of the Nile or Niger. Most of the water has gone underground. To this subterranean Oued R'ir the French have sunk hundreds of artesian wells. These water millions of palm trees, newcomers, like white men and dromedaries, to these time-wasted lands.

Three distinct types of dates are found in Biskra's market place: dry yellow ones, hard as acorns, in big goat hair sacks; so-called "greasy dates," sewed into goatskins and used for soapmaking; and the Deglet Noor, transparent as amber even when flattened into neat boxes or sealed in cellophane.

For sale, too, are bunches of male date blossoms, a sprig of which is tied in each bunch of female flowers; and piles of date pits so huge that one wonders at the labor, soil, sun, and water that will be needed before mature trees, grown from such trifles, spread their shade and produce their honey-sweet crop.

Algiers Seems Another World

Following old Numidian trails known to the soldiers of Augustus when Algeria was the granary and oil cruet of Rome's golden age, we threaded a narrow gorge and looked down on the town and oasis of Bou Saada, within easy motoring distance of Algiers.

When mists hang heavy over Algiers' summer palace or cold winds sweep on the capital from the north, fortunate folk hunite the mountains and let Bou Saada's sunshine soothe their souls (Plates XII-XIII and XV).

Here the French painter, Etienne Dinet, and his partner, Slimane ben Ibrahim, found models among the dark-eyed women of the oasis. Here their gay sisters shake gilded stomachers in dances that date back to Salome. Here, before the travelers go back to desk and kitchen, they complete their desert fling by riding contemptuous camels along the golden dunes.

On the first lap of the return into another world, mud houses gave way to red-tiled roofs. Across the rolling countryside, farmers spring-plowed and fruit trees spread their petals to the cool and humid breeze. Near a mountain pass a splendid pine grove, planted as a memorial to the dead of World War I, spread its evergreen mantle. Once again water came from dripping clouds, not waterskins.

To the northeast the snowy Djurdjura masked the sea. By night we would be in Algiers, again aware of clothes, beauty shops, books, the day's news, and letters from home.

With regret, mingled with furtive relief, we realized our oasis-hopping days were over. From our hotel balcony we looked north along tip-tilted Algiers, glittering with electric lights. Out in the harbor a ship's whistle blew. Four hours away by air, Paris shivered. Back in the desert, camels stretched reptilian necks and burbled to the touch of sun-baked satyrs.

Kodachrome by Marvin Newman © NGS

↑ Bottles and Cattle Horns Cap the Adobe Spires of a Museum in El Golea

Here Commandant E. M. Augieras, a Frenchman famed for his Sahara explorations, kept a private museum and zoo. His trophies, carefully guarded, remain on display. This weird roofing is of Sudanese design.

← As Evening's Shadows Lengthen, Camels Break the Day's Thirst at El Golea

At this oasis progressive horticulturists have drilled 15 free-flowing artesian wells. The excess water drains beyond the palm groves. It is so brackish that it has encrusted the banks with mineral salts.

▲ No Inspector in Ouargla Checks the Butcher Who Weighs In a Few Flies

▼ Business in Biskra Comes Before Pleasure, but It's a Tight Race

Red Peppers and Blood Oranges Glow Beneath Feather-Duster Palms in Biskra Market

[illegible]

National Geographic Society

Artists Love Desert-bound Bou Saada, Northern Algeria's "Haunt of Happiness"

Here a French painter, Etienne Tinet, and his Arab literary-cafe [illegible] Simon ben Ibrahim, [illegible] Bou Saada lies a day's auto ride from Algiers.

Gentled, Saddled Camels Wait in a Courtyard to Take Tenderfeet to the Dunes

[illegible]

On Paved Highway or Rock-strewn Sands the Dromedary Is Slow and Stupid but Patient and Enduring

At the Last Stopover, Ben Sauda, Travelers Bid the Oases Adieu

[illegible] to take [illegible] from [illegible] to [illegible] [illegible] by geologic [illegible] and [illegible]

[illegible]

[illegible]

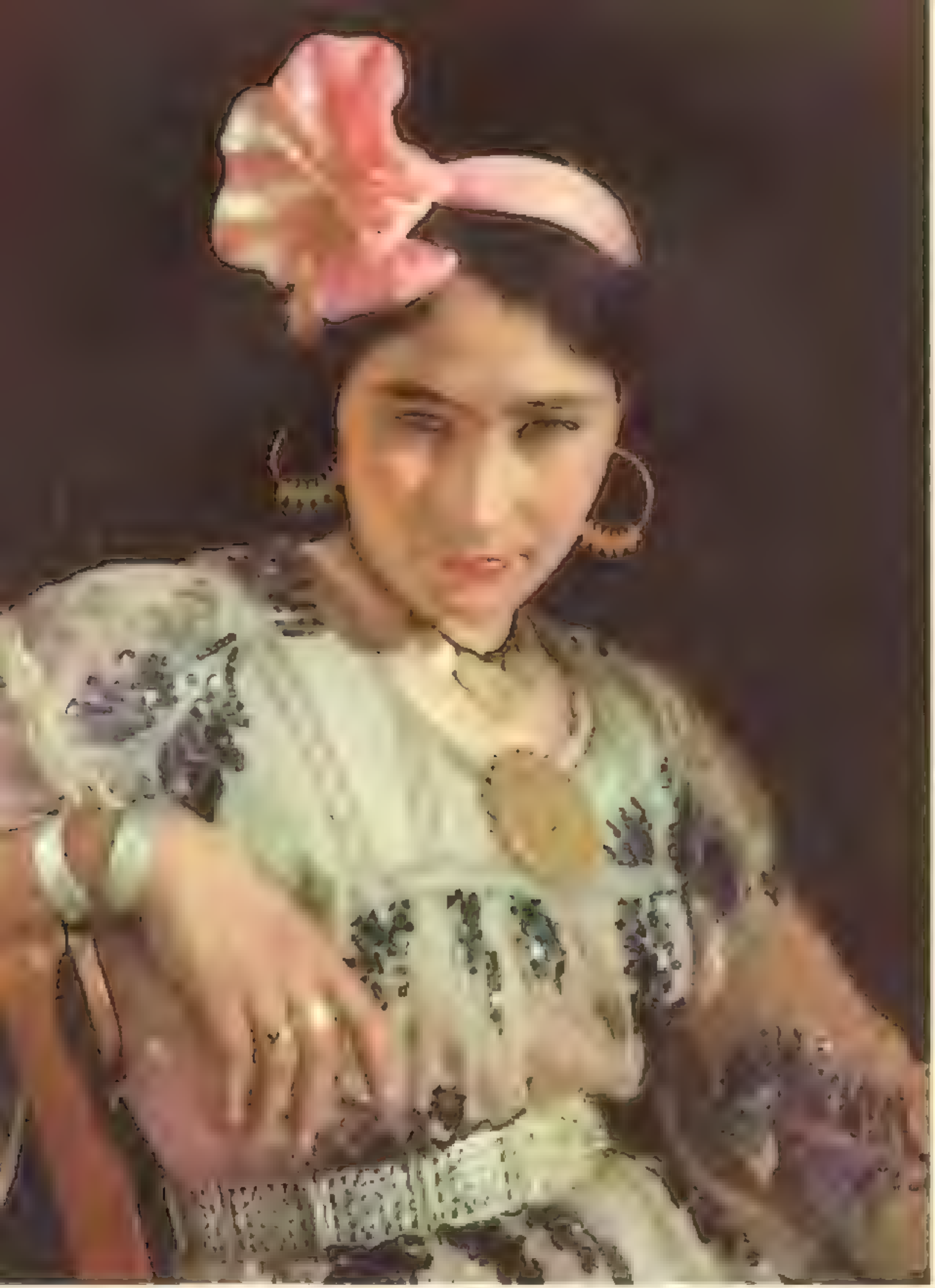
[illegible]

"I never knew the desert could be so beautiful and yet so terrifying."

[illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

"How proud the sun feels [illegible] winter [illegible] Paris, London, [illegible] Brussels, or Washington [illegible]



Gone to Fort Knox Is Her Treasure: the Ouled Naïl Dancer Wears Gold Sparingly

[illegible] gold [illegible] in real estate, [illegible] the [illegible] Dancer [illegible] Lacroix [illegible] and [illegible]

Sea Fever

By John E. Schultz

IT ALL started with rereading the poem [illegible] of a moonlit Quito night.

"I must go down to the seas again, to the lonely sea and the sky. . . ." *

John Masefield's haunting lines and the beauty of three snow-capped peaks of the Andes, glimmering like ghosts on the horizon, made an irresistible call to adventure.

My family had lived in Ecuador for several years, and in the spring of 1947 I had been there for some time on a visit. I intended to return to the University of Chicago for the fall quarter, but the summer was open for travel. It didn't take me long to decide to go "down to the seas again." In my case, though, it wasn't "again," for I knew little of the ocean.

It took several days to arrange passports and gather equipment. I had no plan except to start eastward from Quito, the capital of Ecuador, and somehow arrive in Chicago in time for school.

On May 11, 1947, to be exact, I started walking over the Andes. A friendly U. S. Army sergeant had given me a ride to the end of the road (page 239). My equipment consisted of an old double-barreled shotgun, a 50-pound pack, a few charts, a compass, some sandwiches for the first day, $21 in Ecuadorian money—and a wealth of misconceptions about what was to come.

Over the Andes by Mule Trail

The first few days over a rough, muddy mule trail and up through a 13,000-foot pass were pretty discouraging, although the Indians were friendly and I had no trouble buying food.

A week from home and some 130 miles away, my feet were raw; but I was over the worst of it and on the headwaters of a tributary of the Amazon (Amazonas) called the Rio Napo. The Napo rises in the Andes and flows through the jungles of Ecuador down into Peru, where it joins the Amazon, the "mother of waters," some 50 miles below the town of Iquitos (map, page 241).

At the head of the little-inhabited Napo I bought a slim dugout canoe from a native for 60 *sucres*, approximately $4.20 at the rate of exchange at the time. Sixteen feet long and as many inches wide, the craft would turn over at a stern glance.

Armed with a broad oval paddle and mental pictures of the way Canadian voyageurs propel their canoes, I began to learn to paddle in the first hundred miles or so of rapids. Miraculously my unstable craft didn't capsize, but I lost all my romantic ideas about northwoodsmen and came to use the short, choppy stroke of the natives.

After a few days, river travel became easier as my paddling muscles toughened and I learned to handle the canoe.

In Ecuador the Napo flows through the homeland of some primitive Indians called *aucas* (meaning "enemy" or "rebellious"), who are considerably feared by their neighbors. In Quito I had heard stories of white men being killed by the aucas. However, I didn't even see one, nor was I favored with a spear flung from a riverbank.

The natives, with whom I spent all my nights and whose food I shared, were uniformly friendly and hospitable, as indeed was everyone during the entire river journey.

Monkey Meat Preferred to Parrot

By the time it enters Peru the Napo has fewer rapids, is broader, and runs more leisurely. Once in Peru I began to learn many things about the jungle and its people. Going [illegible] dead-like quietness of shady forests, I shot my first monkey and found that I much preferred monkey meat to that of parrot.

Most charts are rather vague about the Napo, but, by a rough estimate, I had walked and paddled nearly a thousand miles when I arrived at Iquitos, Peru, with my $21 capital almost gone (page 246). I worked there for five weeks as a mechanic to earn the necessary funds to continue the voyage.

Iquitos is as far up the Amazon † as ocean-going vessels can travel. Some 2,300 miles from the ocean, it is even visited, during high water, by 7,000-ton cargo ships.

Curiously enough, most heavy cargo sent from Lima, on the Pacific coast of Peru, to Iquitos, east of the Andes, is transported by water. Freight goes by ship up the west coast of South America, through the Panama Canal, down past Venezuela to Brazil, and 2,300 miles up the Amazon to Iquitos. It is cheaper

* From John Masefield: *The Story of a Round-House* [illegible] and used with their permission.

† See, in the NATIONAL GEOGRAPHIC MAGAZINE "Amazon, Father of Waters," by W. L. Schurz, April, 1936, and "Journey by Jungle Rivers to the Home of the Cock-of-the-Rock," by Ernest G. Holt, November, 1933.

From Quito, Ecuador, the Author Started His Solitary 6,000-mile Trip

[illegible]

For the First Few Miles the Traveler Has Company and Transportation

[illegible] to Miami, Florida. [illegible] the shotgun and [illegible] the [illegible] Expedition, a U. S. Army [illegible] in the [illegible] capital [illegible] Edward G. [illegible]

to send most materials 6,500 miles around the northern end of the continent [illegible] 650 miles by land directly over the Andes.

Sea Fever a Shell-type Dugout

The proceeds from overhauling an old [illegible] enabled me to buy a more suitable [illegible] of the canoe (shell) type, a craft [illegible] quite necessary on the broad Amazon.

Ordinary dugout canoes, merely hollowed out logs, were undoubtedly among the first vessels man had and are found among primitive peoples in various parts of the world. For [illegible] reaching of a hundred miles or [illegible] hundreds the Indians build a type of canoe which I have never heard of anywhere else.

[illegible] feet long, my canoe was a [illegible] (approximately $1[illegible]) [illegible] take me more than [illegible] miles in 10 months. I christened her *Sea Fever* after the poem that inspired the trip.

By using the soft, light *cedro* (South American cedar) and the casco method of construction, a boat can be built with a beam much greater than the diameter of the tree used. The *Sea Fever*, for instance, which [illegible] four feet in beam, was constructed of a log two and one-half feet in diameter.

Instead of hollowing out the log with the sides almost vertical, as is done in making an ordinary dugout, the casco builder pulls up the sides gently through a narrow slit.

To get the right thickness—about an inch at the sides to an inch and a half on the bottom—he opens numerous holes about three eighths of an inch in diameter. When the craft is finished these holes will be filled with wooden plugs; the water causes them to swell, making the craft watertight.

After the hull [illegible] the most important step. The hull blank, looking vaguely like a clear with most of the fiber gone, is supported on sticks, open side down. A fire is built underneath and as it heats the wood men pull the sides, stretching the opening.

The owner, crawling under, inserts three or more sticks to keep the widened slit open. As the artificial stretching continues, he replaces these with longer ones, until finally the dugout reaches the right width. Charred and excess

Backbreaking Work, but These Men Can Keep It Up All Day

[illegible] Amazon.

wood [illegible] are [illegible].

The [illegible] Half of the [illegible] However, the [illegible] which results [illegible] are not too high [illegible]

The art of [illegible] canoes is gradually disappearing as civilization moves in.

Paddling down the Amazon

Filled with gear and an extra paddle, the [illegible] left [illegible] on August 4, headed [illegible] toward the [illegible] and Atlantic. At first I tried to rig a makeshift sail, but found it not worth while because of the light and baffling breezes.

Canoeing on the Amazon is much different from [illegible] the Napo. The current is [illegible] and the water is very muddy. Even as far upstream as [illegible] the river is more than a mile wide and has many different channels and passages. The [illegible] is to find the channel with the strongest current [illegible] the principal problem in paddling down the Amazon. Often the wider opening leads to a winding passage with no current, a passage that may take a day to paddle through, yet may represent a distance of only 10 miles in the main river (page 245).

Back Home the Hard Way! The Author's Adventure Route from Quito to Miami

Crossing most of the South American Continent, the youthful Schutz hiked over the Ecuadorian Andes [illegible] Amazon River to the sea. [illegible] Miami last June, his sails still intact.

I found that debris floating downstream had a tendency to remain in the portion of the river where the current was strongest. Even the "cross-overs," where the river swerves from one direction to another, are fairly well marked by a line of trash and spume. Except in the widest places, where the current is weak, the best channel is usually pretty distinctly indicated by such debris.

On the Napo all but two of my nights were spent with Indians on the shore because of the danger from rapids and log jams during night travel. However, the great distances on the Amazon offer other problems. In the late afternoon I often was paddling far from shore with no idea where there might be a hut; so it became necessary to stay out on the river at night.

Rocked in the Cradle of the River

Since the Amazon is so full of floating trees and plants, it was easy to paddle up to a floating island of water hyacinths or a large tree trunk as dusk neared. The hyacinths were the best, for they were often matted together so densely that I could throw a sort

Hospitable Ecuadorians Give Schultz Overnight Shelter Here and Soothed His Blistered Feet with Honourcase Salve

[illegible]

Often the Lone Cruiseist Stayed with Natives in Such Jungle Huts. Banana Plants Grow to the Left of This One on the Amazon

[illegible]

Amazon Indians Propel Their Canoes by Plying Their Oval Paddles from the Bow

Many Rivers in One, the Amazon Forms a Maze of Confusing Channels as It Writhes Through West Brazil

[illegible]

At Iquitos, Peru, Schultz Bought His Boat, *Sea Fever*

Larger than the dugout he had used thus far, the new craft was [illegible] canoes by the riverbank. It cost him the equivalent of [illegible] by repairing an old truck (page 244). The vessel is [illegible] a boat. A busy river port, Iquitos (population [illegible]) is the [illegible] urban center on the upper Amazon. [illegible] rubber-gathering and distilling, it makes straw hats and soap.

of makeshift anchor right into the middle of the mass. The large underwater area, composed of thousands of bulbs, made an ideal sea anchor.

Once secured to hyacinths or something else I could put up my hammock between two little masts with a mosquito net over the top and tranquilly sleep while floating down the river. This method of night travel never once led me into the wrong channel, and many times I awakened in the morning 30 miles downstream.

During the first week in the *Sea Fever* I had a tremendous amount of difficulty learning to manage her. When I sat in the stern trying to paddle, as I had done in my first boat, I found her so wide and shallow that I had to lean far over and almost twist my wrist off to keep from going around in circles.

Soon I found that a canoe is not supposed to be paddled from the rear, for, during the first days out of Iquitos, I met and observed natives in canoes similar to mine (page 244). When paddling along they were invariably squatted in the very bow of the boat with the stern quite out of the water. It looked [illegible] but this seemed to slide along [illegible] leaving in the [illegible] of the *Sea Fever*.

Whenever I was exhausted from [illegible] to keep on [illegible] course while paddling from the stern, I'd try to teach myself how to paddle from the bow as the natives did. Finally a native showed me how to do it, and travel was much easier after I acquired the knack. The paddle is put into the water to [illegible] side instead of forward and is brought in toward the body with a short, easy [illegible].

After I learned how to handle my boat the rest of the trip to Manaus was not very difficult. I found it possible to paddle many [illegible] at a good rate, and the distance paddled in [illegible] time, combined with that floated at night, often was surprisingly large. Twice my chart showed, I covered more than 110 miles in 24 hours in stretches where the Amazon narrowed and therefore flowed more rapidly.

At the Peru-Brazil border the river for a while became very wide, and I began to think [illegible] more time on my vacation than I

had planned. The *Sea Fever* was such a good boat and the trip so [illegible] I [illegible] Manaus, I decided not to send home for money and fly back to school, as I should have done, but to continue by canoe to Trinidad and possibly on to my home town, Miami, Florida.

On August 15, the day before my 19th birthday, I arrived at Manaus on the Rio Negro near its junction with the Amazon (pages 240, 234, and map, page 241). There I was the guest of Dr. Leopoldo Neves, Governor of the Brazilian State of Amazonas.

Having paddled 80 miles on the Napo and 1,250 on the Amazon, I was ready to try some other [illegible] of [illegible] power. While [illegible] stopped [illegible] trouble.

With materials furnished by the Hore Lumber Industries [illegible], a friendly carpenter helped me strengthen the *Sea Fever* for an ocean voyage. We braced her with five frames and added fittings which [illegible] the sides. With this [illegible] she had eight inches of freeboard when fully loaded. Amidships was a [illegible], and deck was [illegible] low, and a rudder was rigged on.

I had read somewhere that a yawl rig was good for single-handed cruising, so I fitted two masts, each about seven feet high. An Indian carpenter helped me design the sail plan and make the sails.

Since Manaus is about 1,000 miles from the ocean, little was known about sailboats, and all we could [illegible] was some blue and white cotton [illegible]. Masts, [illegible] were made of [illegible] and were stepped in fairly good shape nine months [illegible] 1,000 miles later.

Natural History Photo

Man-eating Piranhas Quickly Reduce Victims to Skeletons

In a frenzy of blood lust, a school of these fish will attack [illegible] and tear with thousands of keen, [illegible] triangular teeth. The creatures, 8 to 10 inches long, [illegible] stubby and have an underslung lower jaw. While [illegible] canoe in a [illegible] storm on the Amazon, the [illegible] jumped into the boat in time to escape [illegible]

The mainsail was rigged on a gunter so that, when it was raised, the sail actually was 13 feet above the deck. The mizzen was 10 square feet in area, the main 40, and the [illegible] 18 square feet of canvas, which was quite strong and [illegible]

In Manaus I had the good fortune to meet Mr. E. H. Kirk, an American who had been in Brazil many years. Some years before he had sailed a 30-foot yawl down the Amazon from Manaus in 4 months to Belém.

Mr. Kirk [illegible] to me [illegible] I talked to

What Gives These Youngsters Such a Thrill? An Airplane, of Course!

[illegible] Amazon at Forte Bom, Brazil [illegible] Whether Indian, Negro, or white, boys yearn to be pilots when they [illegible] Force spent the [illegible] the Amazon. [illegible] to paddle from the bow as the [illegible] 44 and 246)

and. [illegible] and me several [illegible] books on sailing from which I got [illegible] how to sail. My former experience in [illegible] had been confined to a few hours in a sailboat in sheltered water. Many a time later I wished I had read those books even more thoroughly!

While in Manaus I met the second officer of an American cargo ship, up the river to load Brazil nuts. As we discussed my [illegible] vague plans for reaching Trinidad, he seemed somewhat aghast at finding that all the navigational equipment I had was the pocket compass with which I began the trip. He gave me a plastic sextant of the sort issued by the Maritime Commission for use in lifeboats during the last war, a nautical almanac and a copy of *Bowditch's Practical Navigator*.

I have never been much good at taking advice, so, although at the time I appreciated this kindness, I must confess I wasn't terribly impressed by the importance of the generous gift just then.

The *Sea Fever* sailed from Manaus on September 21, 1947, with [illegible] hundred pounds of iron ballast [illegible] down securely and a variety of canned food. I thought I was ready to sail on to Trinidad.

Learning to Sail—the Hard Way!

At first there was a little difficulty in learning how to set the sails and the [illegible] so that the *Sea Fever* would [illegible] the wind was always from [illegible] and it was necessary to tack the whole [illegible] to the sea. However, after sailing several hundred miles I began to feel, with my usual overconfidence, that I knew everything there was to know about sailing.

Six days out of Manaus and 450 miles away I tied up and visited the town of Santarém, at the union of the Tapajoz River with the

At Manaus, Brazil, a Thousand Miles up the Amazon, Parks, Boulevards, and Public Buildings Recall a Rubber Boom That Stretched and Snapped

Many rubber [illegible] Manaus [illegible] Amazon Valley [illegible] Manaus [illegible] electric lights [illegible] capital [illegible]

Amazon. Shooting off in the morning I passed several beautiful, some of the [illegible] I ever saw.

Crossed on the southward track, I sailed out from Santarem into a pretty stiff breeze. The boat [illegible] I hit [illegible] for [illegible] small [illegible] I knew about sailing, all of my sheets were on the same cleat, the main-sheet underneath was a foot on the deck.

Along some miles out the *Sea Fever* passed the [illegible] and small villages where the two rivers join. There [illegible] all the [illegible] Rather cramped I found out that one doesn't tie down the sheets on a small boat! I couldn't even [illegible] the rope [illegible] free [illegible] unwinded.

While she was turning over, I suddenly [illegible] all the ladder and managed to get a hold and stay clinging to it. The canoe sails were [illegible] I [illegible] have [illegible] seven or eight feet down when I commenced holding breath [illegible] longer and how to come up.

Luckily, I managed to [illegible] the ladder [illegible] the same [illegible] I think [illegible] has a good deal of humor.

As the *Sea Fever* [illegible] up to the [illegible] I also learned the hard way that one [illegible] when sailing in a small boat. Almost everything in the cabin was lost, except the [illegible] in a rubber bag [illegible] passport, [illegible] few [illegible] the important [illegible] was [illegible]

"Home Sweet Home" on the Rio Negro May Be Here Today and Gone Tomorrow

At Manaos, where the Black River joins the yellow Amazon, [illegible]

Through Belem, Sometimes Called Para, Funnels Most of the Produce of the Future Amazon Valley

[illegible]

[illegible]

Hammocks, Bottles, and Haunches of Meat Festoon an Amazon River Steamer

Passengers on the main deck [illegible] hammocks [illegible] for days and sometimes for weeks [illegible] they [illegible] and sleep [illegible] while the great river [illegible] Natives [illegible]

Mr. Antonio Mendonça, of Santarém, who saw me struggling on my overturned sail wagon [illegible] a pair of pajama trousers just as a squall very kindly came to my rescue and towed me in. He was most hospitable and helped while I was in Santarém, where I partially refitted the *Sea* [illegible]. One of the bright spots in adventure like this is that one finds that people everywhere are usually ready to [illegible] someone in trouble.

At Santarém, some 460 miles from the Atlantic, the effect of the tide could be noticed in that the river current slowed considerably twice a day. The winds were much stronger in this region and I was able to sail a good distance each day. There were also quite a few squalls. I met twelve squalls on the lower Amazon, for these can occur at any time.

Tricked by a Whimsical Wind

One night on the lower Amazon I was asleep in my hammock when the *Sea* [illegible] had [illegible] I awoke just before a small squall, at about two in the morning, and judged the time from the position of Orion. For some reason the wind was blowing crosswise at the start of the

squall, so I decided to take advantage of the opportunity to sail with a stern breeze.

Raising the mainsail, I cast loose from my "sea anchor" quickly, before the first clouds came overhead. I could see one riverbank as a dark line in the distance, but not the other. In the middle of the river at night it is often impossible to tell which way the current is flowing without some reference other than the banks; however, a look at Orion showed which way was downstream.

Until morning I sailed with all sail set. The sky had become completely overcast and I saw no stars and neither of the banks until daybreak. The wind must have veered around gradually, for at dawn I found I was sailing back *upstream* at the same rapid rate and was many miles the lower.

Fish Bites Man!

On another night, as I slept in midriver, again anchored to a floating island of matted hyacinths, one of the strong sudden squalls characteristic of the lower Amazon came upon me about midnight. I was floating a good distance from shore, but, as the wind was blowing across the river, within a short time I drifted up to the bank.

My anchor was dragging, and the strong wind and waves were threatening to pound my boat to pieces against the shore. To hold the *Sea Fever* off the sand bank, I jumped into the water, which came about up to my chest.

Just as the storm was slackening, I suddenly felt a sharp, tearing bite at my left ankle. I quickly jumped into the boat; luckily, by then the wind had abated sufficiently so that the anchor would hold alone. In the morning I found a small hole in my leg, probably the result of a bite by a piranha (page 247).

These small but vicious carnivorous fish are greatly feared by the natives. They are particularly dangerous in the shallow waters near the river's edge and in calm estuaries away from the main current. The Indians are deathly afraid of putting any part of their bodies into shallow water.

Piranhas will attack singly, but what makes them especially dangerous is that they usually travel in schools of hundreds or even thousands, and the taste or smell of blood instantly makes them killers.

I was very fortunate not to meet a school of these flesh-hungry fish. Apparently I merely ran into one that had stepped out for a midnight bite.

When the *Sea Fever* reached the Amazon Delta, I found that the current was completely slack twice a day because of the tides. I chose the northern branch of the immense and intricate delta, and, after being lost twice in the maze of sand bars and islands, reached the little town of Macapá.

"Down to the Sea" at Last

In Macapá, through the kindness of Dr. Raoul Valdes and his associates, my canoe was fitted out in one of the boatyards of the Government of the Territory of Amapá, of which this town is the capital. Decking was put on the *Sea Fever* along each side and a high coaming was mounted. A heavier rudder was constructed and a canvas cover made for the cockpit.

While this work was in progress, I visited the largest port on the Amazon, Belém (page 251). Here an American ex-naval officer, Bill Ray, who was running a surplus destroyer escort up the river as a tugboat, kindly gave me a good four-inch Navy boat compass and a small pump. The pump turned out to be far more important than the compass.

For provisions the *Sea Fever* was stocked with 10 pounds of crackers, 100 oranges, several tins of jam and chocolate, 10 cans of tomato juice, and 10 gallons of water in two 5-gallon oil cans.

For some reason I firmly believed then that the staple in my diet at sea was going to be raw fish. I somehow neglected to consider the possibility that I might not catch any fish. I saw no necessity for other provisions and much equipment. I had a sea anchor, a 20-pound iron anchor, fishhooks and line, and extra material for repairs.

Awesome Power of the Amazon Bore

I sailed from Macapá on December 9, 1947. During the four days it took to sail down the Canal do Norte to the ocean, I observed several times the phenomenon called the *pororoca*.

While in and around the delta I had often been warned of this tidal flood, or bore, caused by the advance of rising tidal waters through a rapidly narrowing channel. Always it was described as extremely dangerous.

My first experience with the Amazon bore came one morning when I was about 40 miles from the Atlantic. The tide was almost at low water and the stream was ebbing rapidly, the tidal ebb combining with the river's current. Along the shores many sand bars were exposed or awash, most of them covered with stranded trees and branches.

Suddenly I heard a low, ominous mutter, very far away, which increased within a few minutes to a roar.

I first saw the wave when it was about three miles away; it was advancing very

Below Manaus the Black Waters of the Rio Negro Mingle with the Amazon's Tawny Flood (Upper Right)

Vardy Stunning This Tarpon Beast Will Be Hoisted Aboard a Boat by the Horns

rapidly along the shallow water near the river-bank. The other bank was too far away to be seen, but I am told it is washed by the same tidal wave.

As the bore drew abreast, I was about half a mile from the bank and a quarter of a mile from shallow water. For at least 400 yards in front of the first waves all of the water had been drawn off the mud flat by the receding tide, leaving it bare and exposing the waterlogged and embedded debris which covers the river bottom.

Words cannot express the awesomeness and power of this bore. The first wave seemed to be about nine feet high. It was white and breaking like a surf roller all along its upper five feet. The whole wave seemed filled with logs and branches. Long tranks were being hurled into the air and somersaulting back. The sound, even at my distance from the bank, was extremely loud.

Behind the first wave came two smaller ones, about 200 yards apart.

In the deeper water, where the *Sea Fever* was sailing, the bore took the form of three long, high swells which, though large, were not dangerous. As soon as the waves had passed, the current was flowing up the river almost immediately at full flood strength. I hurriedly turned in toward the bank to wait out the flood tide and found about a fathom of water over a bank that had not had more than a foot of water covering it 10 minutes before.

The whole thing, which came and passed within a few minutes, gave an impression of immense and terrible power. The natives are extremely afraid of being caught in shallow water when the pororoca comes roaring up the river.

I can easily believe that a boat, even a fairly [illegible] in less than two fathoms when the tidal wave came might be in serious danger. If it were well battened down, it might not be swamped, but probably would be badly battered by the logs carried forward on the crest of the wave.

The Open Atlantic—and Seasickness

On December 11 I sailed out into the Atlantic on the ebb tide. A very heavy onshore wind was blowing; only once in the next six and a half months did I encounter stronger winds, excepting short-lived squalls.

My plan was to sail about 60 miles out, enter the South Equatorial Current, and sail in that stream parallel to the coast to Port of Spain, Trinidad, staying offshore, out of sight of land, the whole distance.

The wind was from the east-northeast, while the land trended north. The strong current, sailing almost directly against the wind, created a nasty chop. The *Sea Fever* never worked too well to windward, and I found it very difficult to get away from the coast.

The situation was further complicated by the fact that I immediately became seasick and remained so for the next four days. I was forced to reef my mainsail right away and during the afternoon took it down completely, sailing under only the jib and mizzen.

Pump Manned Every Half-hour

Once well out in the chop I found that the *Sea Fever* leaked very badly. She hadn't leaked much in the river because her bottom had been reasonably smooth; however, in the ocean the constant plunging soon loosened the calking of the fittings and the caulking admitting a great deal of water. Occasional seas came over the top, soaking me thoroughly.

During the whole trip to Trinidad I found it necessary to pump every half-hour or so. For three weeks I was never able to sleep more than an hour at a time, and rarely was it that long between the times when I pumped.

The first day was really a nightmare. The temptation to turn and sail downwind to the shelter of the river and the hospitality of new-found friends was always present. However, by nightfall I had worked at least ten miles out, for land was no longer visible.

Setting the rudder so that the boat would sail as close to the wind as was possible under only the jib and mizzen, I expected her to sail more or less parallel to the coast until morning while I tried to catch some sleep. It continued to be very rough, but the seas were somewhat larger and the *Sea Fever* rode more easily.

Everything was afloat inside and I was too sick to lash anything very well. There was little room in which to sleep; I could only [illegible] trunk and my head under the after thwart.

A few minutes after I pumped out the boat each time, water would begin sloshing up over the floor boards. After about 30 minutes it usually began to strike my face and thus awakened me to pump—endlessly, it seemed.

In the morning I found that I was only three miles offshore and within sight of the river mouth I had left 24 hours before!

Each of the succeeding three days was the same as the first—constant sailing away from the coast, regular pumping, and the agony of seasickness with nothing to retch.

On the morning of the fourth day our I identified Marajó Island and found that I had traveled less than 100 miles. The wind stark-

Among the Strange Creatures of the Amazon Basin Is the Giant Armadillo

[illegible] The bony-armored, [illegible] and carrion

[illegible] and shift [illegible] around [illegible] that evening. December [illegible] and the next morning, my fifth day out, there was no land in sight. I was no longer seasick but was not very hungry.

Time to Study Navigation

I spent most of the morning [illegible] the confusion in the boat. All of the food [illegible] the chart [illegible] was turning green. The fresh water had leaked out of one of the 5-gallon cans. I made a few half-hearted attempts to fish but had no strikes.

[illegible] Monday on December 18 I was warm enough, and the [illegible] well [illegible] a booklet that came with [illegible] Navigation. After reading the [illegible] finding latitude through [illegible] of the sun. I [illegible] determination of longitude.

Much to my surprise, I found the [illegible] way to find the longitude of a position is to use a clock and an accurate one at that. I had a watch of a [illegible] dollars in Belem, and it gained two and a [illegible] utes a day until it got wet and stopped.

There were several charts aboard: AAF aeronautical charts of the coast between the

In Tow of a Tender off Trinidad, for Service Almost Swamps—Schultz Waves Reassuringly as He Tries to Get Squared Away

Devil's Island Seemed a Heaven to Schultz When He Landed Here, More Dead than Alive, After an Heavy Voyage from the Amazon

[illegible]

At Miami Schultz Shows How He Used His Sextant

[illegible] "shooting the sun" at sea. The leaning [illegible] wrapped around a stay to keep [illegible] sometimes had to lash himself [illegible]

[illegible] just a board secured to a line of measured length—but never used it consistently. I [illegible] risk to take the speed of the boat [illegible] ur; and I found during the entire trip th[illegible] to keep a all [illegible] a definite course even when I was well. A [illegible] permit [illegible] figures would be of little use.

After a couple of days of practice I was [illegible] to use the sextant as instructed in [illegible] I found that when [illegible] ight the best metho[illegible] was to guess the time so that [illegible] one-half hour before noon I could heave to and take down the mainsail. Then, by wrapping one leg in the windward shroud, the other around the mizzen, and wedging my shoulder up underneath the shroud, I could get my hands free.

Of course in fairly heavy seas it was [illegible] to tie myself to the mizzen as well.

Waiting until the boat swung up to the crest of a wave I would try to get a shot somewhere near the top. I [illegible] half an hour before noon and [illegible] them could in [illegible] how soon the sun would be on the meridian.

The pamphlet that came with the sextant made it relatively easy to determine latitude. Depending on how rough the sea was, I usually found my latitude to within five miles.

Devil's Island a Welcome Sight

The original plan had been to stay well ashore in the south [illegible] Equatorial Current [illegible] from the Amazon. However, on the morning [illegible] ing land, I saw an island quite near.

I had made some error in navigation. The sky had been partially overcast at noon the day before, so I had failed to get a sight. Als[illegible] longitude.

I [illegible] what land it was. But [illegible] then I was very weak [illegible] water boils, so it seemed best to go ashore for a visit.

Not until I reached a little dock on one of [illegible] I was [illegible]

a man dressed in red-and-white pajamas, the prison uniform, did I realize that I had landed upon the French Devil's Island penal colony, the Salut group (page 259). There were only a few prisoners left—fifty or so—and three guards.

The small colony is on Royale Island, which is the highest of the three and has a lighthouse. M. Maurice Gesret, head of the guard detachment for the "Health Islands," was most hospitable. My boils were treated by the prison nurse, a trusty who was formerly a Parisian pickpocket. M. Gesret furnished me some drinking coconuts, fresh water, and more food.

For several days after leaving the penal colony *Sea Fever* ran into squally weather. By this time I was very weak; raising and lowering the mainsail became more and more of an effort. The constant pumping was weakening me, and the spreading infections gave much pain.

Often Cold, Though in the Tropics

Curiously enough, during the whole voyage and particularly during the stretch from Devil's Island to Trinidad, I suffered quite a bit from the cold. Spray in the daytime and sleeping in the water which leaked inside the canoe at night combined to cause a constant chill.

It may seem implausible, but this suffering didn't seem very important. It was accompanied by a kind of abstraction in which I could think very clearly and seem to be quite independent of the pain in my body. It took a great deal of concentration to do even the simplest thing that involved motion, but this physical inertia seemed to have no effect on thinking. The whole experience was a sort of spiritual elevation.

A few days' sail from the penal colony I developed a method of determining a line of position. On my several-months-old pilot chart was much valuable information—winds, currents, etc. These charts also show the shortest routes between principal ports. For instance, there is a heavy black line showing the shortest route between Port of Spain and Belem. Large ships traveling between major ports shown on the pilot charts usually stay pretty close to the courses on them, in order to cut down expenses in fuel and time.

I thought of those things; so on sighting a large ship I'd try to estimate her course. Then, since I usually knew my position to within one or two hundred miles, it was easy to look for one of the black lines in my general area which slanted in the estimated direction.

Since the ship was probably on the line and I was near her, it was easy to decide that I was on the "line of position" that was already marked out for me. If I was able to get a latitude observation near the time that I sighted a ship, I usually felt that I knew my position rather well.

Trinidad and a Hospital Bed

Six days out of Devil's Island I saw a great number of sea gulls for the first time, all coming from the west early in the morning. This seemed to indicate that I was closer to land than I should have been at that latitude.

I changed course considerably to the north and the next day, about 6 o'clock in the evening, sighted Trinidad's Galera Point Light, with no further changes in course.*

It was most fortunate that I saw the sea gulls, for if I had continued on the former course I would have come down on the rocky and harbortless eastern coast of Trinidad during the night. Galera Point is on the island's northeastern extremity. It took me until the evening of the next day, New Year's, to land in Teteron Bay at the U. S. Naval Base.

The authorities here were most generous and helpful. I was in rather bad condition, but within eight days the penicillin given me in the naval hospital cleared up most of the infections and I felt much stronger.

After leaving the hospital I met Mr. Montgomery H. Colladay, American consul general in Port of Spain. He and his family were most hospitable and made my stay in Trinidad pleasant (pages 258 and 262).

Time Out for a Contracting Job

Since I had only about four dollars left, I was on the lookout for ways to finance the rest of my trip. Accordingly, I was all attention when Mr. Colladay casually mentioned that some difficulty was being encountered in finding a contractor to do a job for the United States Government. When I expressed interest, he referred me to Mr. Jan Nadal, of the U. S. Army Engineers, who explained the situation.

During the war the U. S. Army had driven 10 pilings into the sea bottom about a mile off the southwest end of Trinidad. These pilings were in 20 feet of water and were used as mooring dolphins for supply ships serving our coast artillery base guarding the Serpent's Mouth, the strait between Trinidad and the mouth of the Orinoco.

This camp was no longer in use, and the United States had an agreement with the

* See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Crossroads of the Caribbean," by Lawrence Sanford Critchell, September 1957.

On Sailing Day Schulz Loads Supplies Before Heading North from Iceland

[illegible] of the American [illegible]

Iceland [illegible] government to [illegible] the [illegible]. A [illegible] to be removed.

For several months Mr. Nadal [illegible] had [illegible] contractors for the job. [illegible] several months [illegible] pulls [illegible] speed [illegible] off below the bottom. [illegible] was that there were no [illegible] powerful [illegible]. He [illegible] but [illegible] speed.

The [illegible] piling. [illegible] and [illegible] them out.

I suggested to Mr. Nadal that I might be [illegible] on the job. It must be [illegible] that with an eight-months' beard I looked rather disreputable. This [illegible] of Mr. Nadal's reluctance to consider [illegible] for the contract.

He [illegible] more dubious when he asked how much capital I had available and I told him four dollars. He said it was impossible to take out pilings without [illegible], and even if there were some other way, the [illegible] required capital and experience, neither of which I had.

[illegible] of youth [illegible] when I [illegible] something [illegible] I decided to [illegible] the south end of the [illegible] to look over the job. Once there, I [illegible] to see the pilings. I took along a [illegible] glass and a hammer.

I dove to the muddy bottom [illegible] of the pilings, and even tried [illegible] under water. The pilings were [illegible] wood and so hard I found it almost impossible to cut them. They were driven 10 feet into the bottom.

[illegible] I returned [illegible].

On the way back to Port of Spain, I [illegible] general [illegible]. We talked for a while of [illegible] general ideas on how the

Giving Its Last Gasp, This Monster Will Carry Off No More Calves

[illegible] caiman fought for hours before it died and could be killed by Brazilian [illegible] Marajó Island [illegible] "Former Inhabitants of the Amazon Delta," by Hugh B. Cott, National Geographic Magazine, November, 19[illegible] [illegible] caiman (*Caiman niger*), largest of the crocodilians, has been known to attain a length [illegible] 20 feet

job might be done and finally decided to form a partnership—he to furnish the capital and I to perform the job.

Mr. Nagal seemed little more impressed by [illegible] the Hohnbler engineering firm than by me alone. He felt certain that, if we [illegible] the contract, we would not only be unable [illegible] but might well leave the job in worse condition for the next contractor. As a guarantee against that, he suggested that we place as a deposit 20 percent of our bid's value.

Done in Three Days for $87.50

There were three bids—one at $2,300, one at $2,000, and ours at $1,100. As low bidder, we were awarded the contract.

More than it was simple. First, I rented a diving helmet, air pump, and hose; then I bought 100 pounds of dynamite and a little booklet, *How to Use Dynamite*. I had been assured that dynamite would only splinter the piles and not remove them completely, as the contract specified. However, I decided to try that plan first.

Hiring the same native boatman and two others to pump air to me, I went down to the bottom. The first day was mostly experimental, since I had never been in a diving helmet before and the pump didn't work properly until I made some repairs.

The piles, near the Serpent's Mouth, were in a strong swirl of the current formed by the merging of the Orinoco River and a branch of the South Equatorial Current. The current and the muddy discharge from the Orinoco made diving at first difficult and very frightening. However, once started it was really quite easy. In three days dynamiting and cleaning removed the whole ten piles at a total cost of $87.50.

Most of my share of the profit was used in preparing the *Sea Fever* to continue the voyage.

I had a very large centerboard made, one weighing 115 pounds. Also, canvas was put down on the deck to stop it from leaking—which it didn't. The fittings were refastened and reoiled to stop them from leaking—which they didn't. The centerboard trunk was traced and refastened to stop it from leaking—which failed, too.

I made a new sail, a jibkite, to be used in running before the wind; it didn't work.

A new sea anchor and the fitting of the boat with oars (she was much too heavy to be paddled by now) completed the list of the major work done on her. Mr. Peter Stone, commodore of the Trinidad Yacht Club gave me invaluable advice.

Last Five Miles Take 24 Hours

The *Sea Fever* sailed from Trinidad on May 4, 1948. It rained hard the first afternoon, and I had not sailed 10 miles before I learned how little use was all my refitting in Trinidad. The boat leaked even worse than before, and in the choppy seas off the north coast of Trinidad I soon became very seasick.

However, the 90-mile passage between Trinidad and Grenada was made in good time. I sighted the island almost exactly 24 hours after sailing from Trinidad—then spent the next 24 hours sailing five miles into the harbor of St. George's. A combination of unusual tides and currents and a choppy sea kept me tacking back and forth all night and most of the day, slowly working to windward.

During this tantalizing day, so close to the shore I wished to reach, my seasickness grew much worse. Having had nothing to retch for more than a day, the morning after sighting land I began to retch hard. I was most unhappy and I reached St. George's that afternoon.

Under the circumstances it was something of a shock to read the port officer's return and find the voyage listed as "Pleasure cruise." The *Sea Fever* was classified with the designation "Canoe yacht."

After several days in St. George's I set sail again, intending to go through the Mona Passage between Puerto Rico and the Dominican Republic. My plan was to stop at Aves Island, a barren rock owned by Venezuela.

Of course I was seasick again for the first two days, and after five days I realized that I had missed Aves Island. By then my watch was useless and accurate navigation difficult.

Sharks followed the boat—but I was unable to catch any. Again I was very weak and ill. Salt-water boils once more were breaking out all over my body.

On the sixth day and part of the seventh I had very heavy weather and found it necessary to take down my sails and lie to a sea anchor. The *Sea Fever* was still leaking badly, too, since I had left most of my warmer things in Trinidad, I was often cold. I navigated, pumped continually, and sailed—but it was as if these duties and actions were independent of me.

One morning I awakened to find the *Sea Fever* sailing straight for a high cliff, the first land I had seen in seven days. I had not expected to sight land for another couple of days and was unsure about my longitude.

The obvious thing to do was to use an ancient and extremely accurate method of navigation—I went ashore and asked where I was! I found that I was in the British Virgin Islands and had struck the island of Virgin Gorda.

I was very sick and asked the way to the nearest hospital. I sailed over to Road Town, on Tortola, where the Commissioner of the group placed me in the hospital under excellent care.

Since no one was aboard to pump, the *Sea Fever* filled with water at the dock the first night in Road Town—to demonstrate again how "seaworthy" she was. However, her natural buoyancy kept her from actually sinking.

When my infections partly cleared up, I sailed on from Tortola to San Juan, Puerto Rico,* sailing 114 miles in 29 hours.

In Puerto Rico the *Sea Fever* was kept at the Club Náutico and further trimmed and caked by the club's shipwrights. Here, in response to invitations, I gave several lectures on my voyage. As the guest of Mr. and Mrs. George A. Stockert, Jr., I had a most comfortable stay.

After taking on rations and water, *Sea Fever* sailed on June 4 for the last leg of the voyage to Miami. Again I was seasick, but since the weather was mild, not seriously so.

Aground 60 Miles from Land

Five days out of San Juan about 10 o'clock one calm evening, I suddenly struck something hard. The boat heeled over, my kerosene running light went out, and water started streaming in one side as I pounded on a reef. The anchor chain became fouled around a rock as the canoe keeled over on her side, almost swamped.

In my eagerness not to strike the northern coast of Hispaniola I had sailed too much to the north and struck Silver Bank, a group of coral reefs some 60 miles from the nearest land. I took down the sails and spent the rest of the night pumping, for the boat leaked badly all night long.

In the morning I found that the shock of striking the reef had torn a large eyebolt from the bow, leaving a hole below the water line.

* See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Puerto Rico, the Gem of Antilles," by John Oliver La Gorce, December, 1924; and "Puerto Rico, Watchdog of the Caribbean," by E. John Long, December, 1949.

Scene Lucian Drama: a Crowd at St. George's, Grenada. (From Kitson, "St. Lucia.")

Schultz and Sea Foxes Reach Miami After a Fabulous Voyage from the Amazon

[illegible] on this picture, [illegible] sailed into Miami's harbor. [illegible] the bridge the [illegible] barge his [illegible] towing barge

I cut a wooden plug and, swimming down, pounded the plug into the hole. This stopped much of the leaking.

Running into two days of calm weather after leaving the bank, I often went swimming and read a good deal after drying out the few books I carried. Sometimes, with just a light following breeze, I put a rope over the stern and dropped back to the end, being towed through the water by my own boat. This pleasure was occasionally marred by the appearance of a shark. Then, of course, I got into the boat in a hurry.

First Landfall in 10 Days

One day, shortly after hitting the reef, I sighted a sail in the distance and gradually came up to it. The craft was a Bahamian sloop carrying dried conch to Haiti. From her crew I got some fresh water and a loaf of bread.

On the tenth morning out of San Juan I awakened to find myself eight or nine miles north of my intended Landfall, Great Inagua Island. Sighting land was even more exciting than usual, since this 10-day passage was the longest I had had between Landfalls.

Shortly after, two other exciting things happened.

I always left a fishing line trailing behind the boat but rarely looked at it. I suddenly saw it in violent motion and pulled it in to find a 25-pound dolphin, almost dead from its struggles against the line.

Sea Fever was rolling wildly in a rough beam sea, and a lot of spray was coming over the boat. As I sat on the windward rail to hold her down, a little brown sea bird landed on my bare head. This bird, a noddy tern, seemed to have little fear of me and grasped my hair tenaciously whenever a particularly violent roll of the canoe started to unseat him. He seemed not even frightened by the strenuous steering necessary because of the heavy rollers.

I postponed pumping as long as possible so that the bird might have a perch. He flew away only when I finally had to stagger forward to pump.

It took all day to sail around a point and along the southern coast to Matthew Town. I arrived there after dark and spent several days repairing some of the damage done by the reef.

Mast Touches Water in Storm

Sailing again, I intended to make Miami nonstop; but on the third day out I encountered the strongest storm I met on the whole trip, excepting short-lived squalls.

Occasionally one of the mountainous seas would break under the *Sea Fever*, rolling her over so far that even the top of the mast touched water. The large centerboard that I had made in Trinidad was of great value then. Even when the boat was knocked down and half swamped, the centerboard brought her back after the breaking wave had passed—but left me the job of pumping out all the water.

During one of the "knock-downs" my sextant fell out into the boat and I stepped on it. Navigational officers, who seem to regard sextants as somewhat holy instruments, to be treated with great reverence, would be shocked at the things it was necessary to do to mine. A piece of matchstick, carefully whittled down, replaced a rusted mirror spring. The shades were replaced with a broken pair of sunglasses, and the whole thing was used upside down, for the mirror was almost gone.

I finally sighted Cuba* and went ashore at the Punta de Practicos, where the pilots for the port of Nuevitas allowed me to stay overnight.

Next day about sunset I was skirting the long barrier reef which guards the northeast coast of Cuba when I sighted an islet and thought there was a passage to it. There wasn't!

Twice as breakers smashed the *Sea Fever* hard against the coral reef on three separate bounces. She filled with water. I lost a lot of equipment: the main boom, the gunter, and the bowsprit were carried away, and the sail was ripped in several places. However, I was lucky and was washed by the waves into the quieter lagoon inside. I managed to get ashore on the little island, Cayo Verde.

Fisherfolk Find Peace of Mind

I spent three happy days with a fisher family living on this isolated rock. With the father and son I went turtle fishing. They set their big nets in 10 fathoms of water. Turtles swam into the nets and entangled themselves. Every two months the family took salted turtle and precious tortoise shell to a near-by Nuevitas for sale.

This kind family lent me tools to patch my rigging, and the women sewed the sail.

One afternoon while I was on Cayo Verde some shark fishermen came over the same reef I had crossed and were wrecked. Their flat bottomed sailboat was sunk, and several thousand pounds of shark were lost. We helped them salvage what they could.

*See, in the SATURDAY EVENING POST, "Cuba—American Sugar Bowl" by Melville Bell Grosvenor, of January, 1947.

No Speedster, *Sea Trout* Rarely Sailed Faster than a Man Can Walk

[illegible]

The spirit in this fisher family strengthened an impression I have often had of other beachcombers, an impression of tranquillity of mind, an acceptance of whatever comes. Those who depend on something as capricious as the wind, the weather, and the fish seem to have a better outlook on life than many in the city who have more conveniences but [illegible] of heart.

[illegible] and sailed along the coast of Cuba [illegible] land again and I [illegible] the Bahama Islands [illegible] and Florida.

[illegible] of the world, at least [illegible] when I went ashore on beautiful Anguilla [illegible] little and small [illegible] [illegible] of [illegible] [illegible] spread [illegible] of [illegible] and white spider [illegible] like a carpet for royal feet. An island [illegible] light-house on the island gave [illegible] the reach of [illegible] to [illegible]

In the afternoon I [illegible] out to the [illegible] anchored a few hundred yards off [illegible] and set sail to the north. There were [illegible] all night and most of the next day, but the first evidence of land I saw was Pacific Reef Light, about 25 miles south of Miami.

That afternoon, June 30, [illegible] I sailed into Miami [illegible]. The next day, after several [illegible] and [illegible] and [illegible] crew [illegible] I was [illegible] by the U. S. Customs.

When I [illegible] the adoption of my [illegible] sail, he [illegible] did not [illegible]. He finally wound up [illegible] but as my personal [illegible]

Biggest Worm Farm Caters to Platypuses

By W. H. Nicholas

IN THE CELLAR of its lion house, New York's [illegible] Zoo operates the biggest earthworm-breeding farm in the world. The Zoo's pampered duck-billed platypuses, Cecil and Penelope, are the cause of this wholesale worm manufactory. They demand 25,000 big earthworms in their diet each month, along with an assortment of night crawlers.

Even the untimely death, last September, of their comrade in captivity, Betty, didn't help the situation much. Winter was coming on and a worm's growth in winter is slow. To supply the main dish on the menu for two platypuses in cold weather is as much of a job as doing it for three in the summer.

When Cecil, Betty, and Penelope embarked on the high seas, en route from their Australian homeland to New York, in the spring of 1947, Zoo authorities began to worry about supplying them with worms. To Christopher W. Coates, curator of the New York Aquarium, went the dubious honor of assuring the platypuses a regular daily handout.

Food Worms Short—and High-priced

[illegible]

[illegible] of our platypuses.

"So we had to start from scratch and build up our own supply from what breeding stock we could purchase.

"The platypuses need two pounds of worms a day. Depending on size, from 150 to 1,000 worms weigh one pound. Of the large size we generally supply, the platypuses consume 25,000 worms a month.

"Our initial order for worms was for 25,000. After three months had elapsed, the dealer finally shipped us 3,500. They arrived about 4 p.m. on Friday, December 20, in the middle of a snowstorm. Christmas fell on the following Wednesday, and I had made plans to go away from the Zoo for a long week end. My trip had to be abandoned, for the worms demanded immediate care.

"No one at the Zoo, including myself, knew much about worms. I distinctly recall picking them up gingerly, one by one, with a pair of tweezers. I soon got over that, and so did tankmen Thomas Callahan and James Malcolm, two Aquarium attendants who were assigned to the actual work of handling the worms.

Worms Flown to Panama

"We felt our way along, and by early April, 1947, we had built up a stock which encouraged us. Then we received a telegram from Mr. David Fleay, the Australian naturalist who was bringing the platypuses to America, advising that he had run out of worms in mid-Pacific and requesting that we fly a consignment of 10,000 to Panama to meet his ship when it passed through the Canal. This we did, although we felt sorry about depleting our breeding stock at this point.

"Then came another blow. The platypuses rejected some of the worms. That meant we had to grow better ones. We went all over Bronx Park looking for various types of worms. By the time the platypuses arrived in late April, 1947, we had found an unidentified species that turned out to be satisfactory. We called them 'fighter worms' because they are so active, although now we refer to them as 'leafworms,' because they occur in decayed leaves. We haven't had time yet to identify our worms scientifically.

"We discovered that our stock thrived best on a basic mixture of soil and elm leaves (page 272). We also discovered that night crawlers were satisfactory as supplemental rations, although the platypuses will not eat them exclusively for more than two days at a time.

"Callahan and Malcolm entered into the spirit of the thing, for this was a definite challenge to all of us. They would come week to the park after dark and spot likely places for finding worms. And they have become adept at catching night crawlers, too.

"With a red lantern one man walks along the grass parallel with a strip of sidewalk, picking up the crawlers as fast as he can and tossing them on the concrete. He sometimes walks 100 feet doing this and then retraces his steps, scooping the crawlers off the sidewalk. The crawlers aren't bothered by the red light, and do not vanish as they do when prospective fishermen go hunting for them with a bright flashlight.

"We have bred night crawlers in captivity for the first time to my knowledge.

"In the early days we used to count the worms, but, as our volume of production rose, we discarded that tedious method and now measure them out in containers which hold two pounds, or a one-day supply.

Cecil Brown Zoo Director, Fans Thousands of Worms but Cares Little Weeds

[illegible] Bronx Zoo [illegible] Director Cecil Brown [illegible] of the worms [illegible] Brown's [illegible] worms [illegible] brown [illegible] a [illegible] of [illegible]

Our hedge pits on the front lawn [illegible] are [illegible] a balanced worm diet [illegible] of [illegible] pasture [illegible] pots — our milk, cottonseed, apple skins, [illegible] meal, [illegible] chips, [illegible] [illegible] (page 274, 27[illegible]). [illegible] the [illegible] — to raise as many of the creatures as possible, as rapidly as possible.

Each earthworm has both male and female reproductive organs, located near its neck. When a tiny, gelatinlike band forms back of a worm's neck, it shows the creature is ready for breeding (page 273). When a pair

Cecil, One of Bronx Zoo's Two Duckbill Platypuses, Thrives on Worms

[illegible]

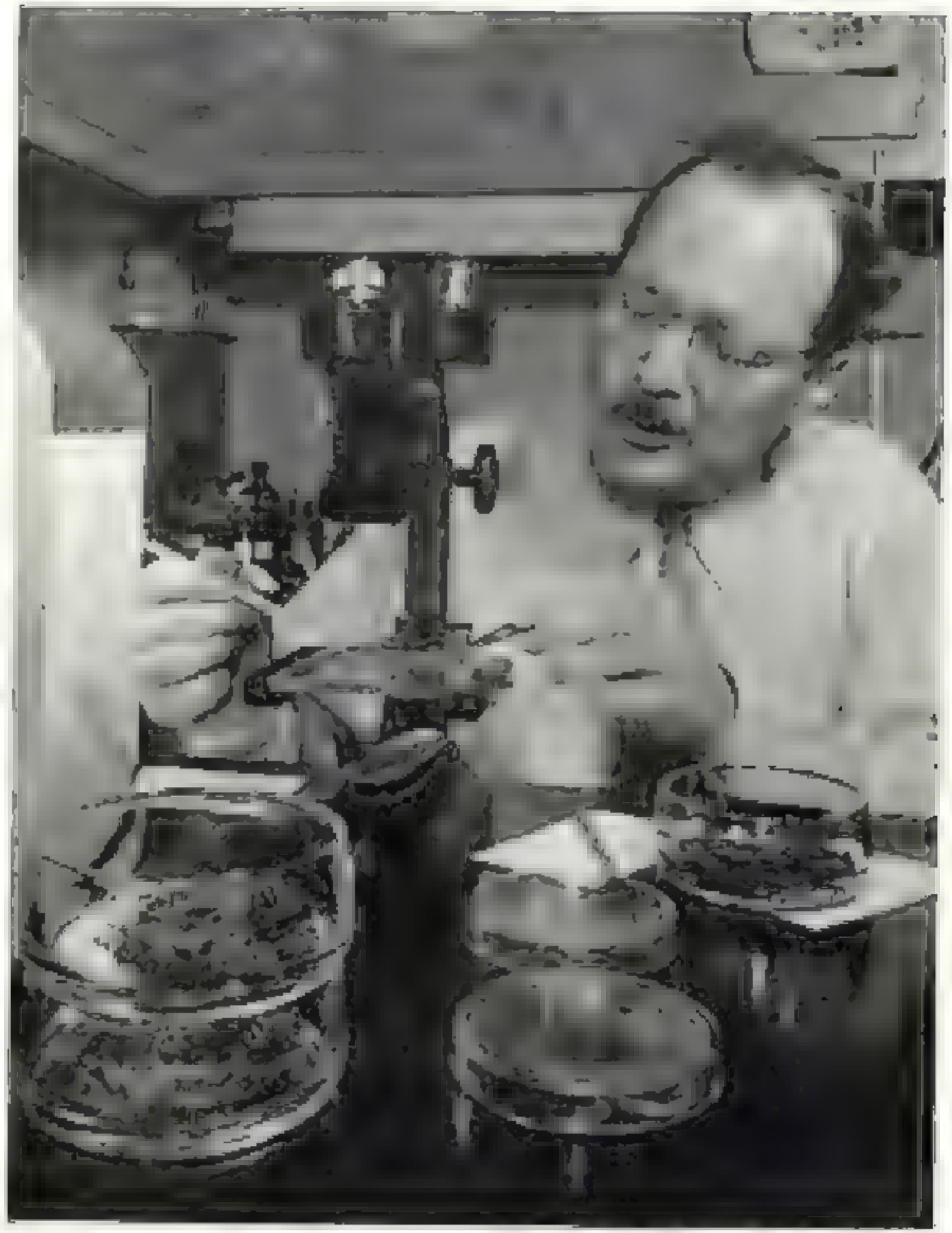
Grapefruit Attracts a Host of Diners at the Bronx Zoo Worm Farm

[illegible]

In These Pits 25,000 Earthworms Fatten Each Month to Feed Two Duck-billed Platypuses

[illegible]

An Aquarium Man "Plants" Succulent Food in a Worm-growing Pot



He Studies a Leafworm for Experimental Breeding

Little Worms and Soil Sift Out; Big Ones Remain

Lowly Earthworms Have Buried Parts of Ancient Cities

Not a Face, Not Voice, Near, or Far In This Squirming Heap; Not Even Earthworm Touches the Soil for Most

[illegible]

[illegible]

Eggs and Nest of a Duck-billed Platypus Bred in Australia

[illegible] platypus [illegible] mammal [illegible] Australia [illegible]

mate, each fertilizes the eggs of the other.

To remove the grown worms from the tubs, small heaps of the mixture of soil and leaves are dumped onto a wire screen [illegible] shaken [illegible]. Small worms fall through the wire mesh into the pit along with most of the soil. Picking the big worms out of the leaves that remain is easy. As Mr. [illegible] performed this operation, I asked him whether he ever yielded to temptation and helped himself to a few worms to take on a fishing trip.

"When I get through with my day's work," he said with conviction, "I don't want to see another worm until I come back next day."

The platypuses [illegible] on [illegible]. They [illegible] and [illegible]. Cecil [illegible] a [illegible] or two [illegible], but his feminine companion usually consumes even the legs.

Mr. [illegible] was [illegible] responsible for obtaining [illegible] and made [illegible] arrangements to [illegible] them [illegible] containers from [illegible] to plane. The platypuses [illegible] every [illegible] hours [illegible] contents that [illegible].

Platypus Keeper Doubles as [illegible] Chef

The platypus keeper, Johnny Blair, [illegible] makes the [illegible] for his charges. [illegible] was [illegible] in the Army during the war, returned to the Zoo [illegible] when the platypuses arrived, and was [illegible] to get the [illegible] ready for them. He uses three hen eggs and three duck eggs [illegible] ration.

The [illegible] appetite of the duck-billed platypus, native to southern and eastern Australia

On the Hind Legs of a Male Platypus Grow Poison Spurs Like Snake Fangs

The platypus is [illegible]

and Penelope [illegible] about [illegible] a century ago [illegible] believed that the creature was a clever [illegible] fake.

When I [illegible] Cecil [illegible] I could [illegible] spurs [illegible] hind legs [illegible] snake. Penelope does not have poison spurs. But if she ever becomes a mother, she will lay one or two eggs and then will [illegible] mammals never [illegible] reptiles have [illegible]

It [illegible] that neither Cecil nor Penelope [illegible] the smells of [illegible]

But they are very sensitive animals [illegible] and they are aware of [illegible] tones of

breaking strongly [illegible] to the point of [illegible] when [illegible] other than [illegible] them up.

Sensitive to Bright Lights

Some platypuses are [illegible] they are sensitive to bright lights. That is why, when they [illegible] the summer [illegible] their pools are covered with a canopy. They live in a specially designed "platypusary" with two pools, one for Cecil and the other for Penelope.

A runway leads from each pool into a series of wooden boxes filled with straw [illegible] the burrows the animals make in their natural state.

In winter [illegible] their quarters [illegible] of the [illegible] house.

---

* See [illegible] National Geographic Magazine, August [illegible]

Few American Indians Ever Went Fishing with Worms Like These

Dr. G. F. [illegible] of [illegible] [illegible]

The summer planting [illegible] was designed to [illegible] the animals feel perfectly at home; yet [illegible] [illegible]

[illegible] a coat of dull paint and then [illegible] Then the natives [illegible] [illegible] and that helped, too.

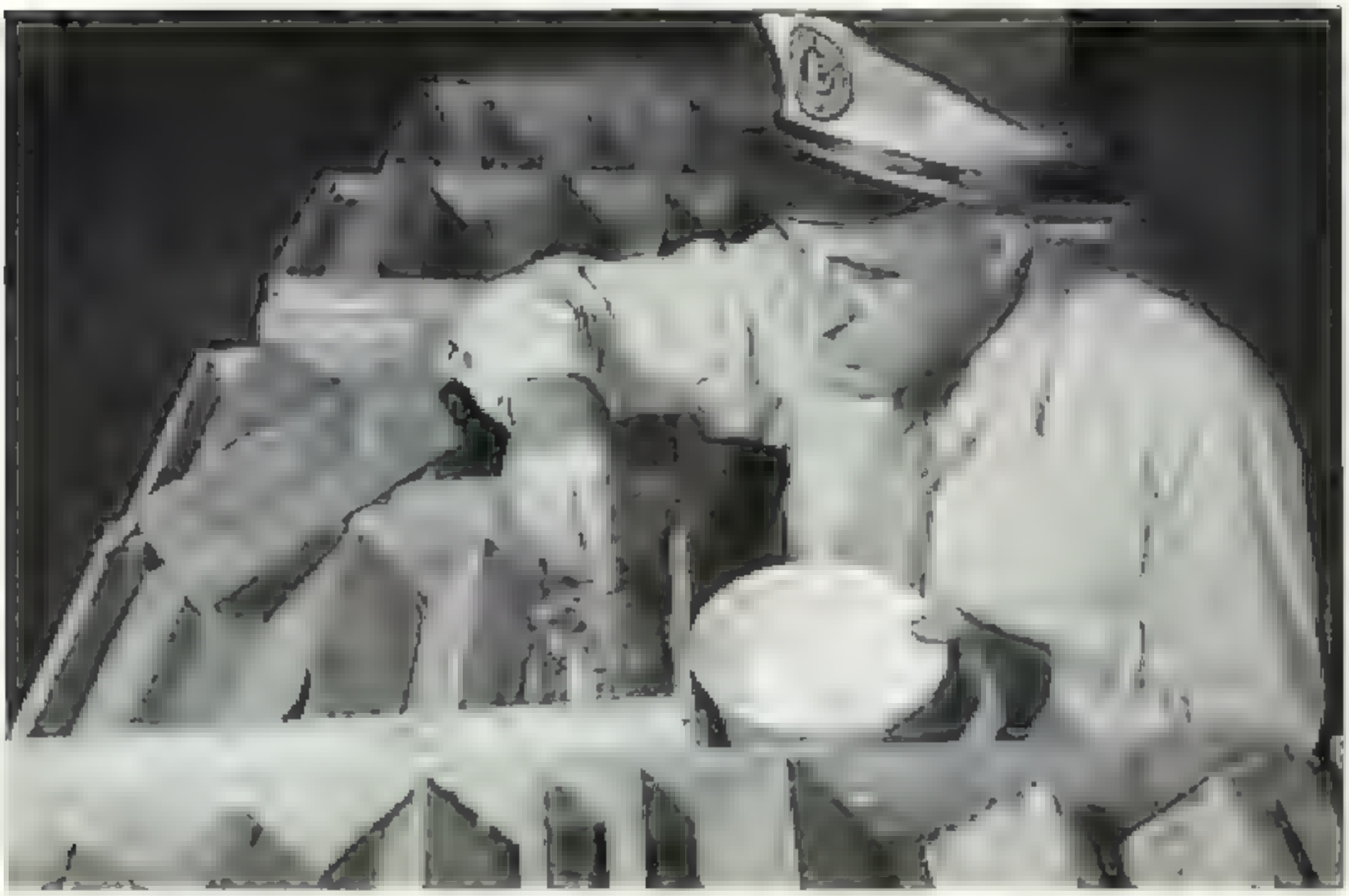
Each day in warm weather either Cecil or Lorraine may be viewed by the [illegible] 3 to 4 p.m. "This [illegible] it any longer," said Blair. [illegible] a recording of a lecture [illegible]

[illegible] its hind feet against [illegible]

Whenever an airplane [illegible] Field [illegible] over the park [illegible] all over. "But the worst of [illegible] was when some [illegible] [illegible] we had escaped [illegible] for [illegible] [illegible] was afraid it was going to fall [illegible]

Feeding Time Is Sometimes Late

[illegible] [illegible] [illegible] water, [illegible] to the surface to [illegible] before swallowing. If the [illegible] were put into the water before the [illegible]



Breeding Worms Get Pablum and Clam Meal for Supper

Each Pinhead Capsule Holds from 1 to 20 Worm Eggs

Applied Biology: Weighing the Merits of Oranges and Bananas

[illegible]

[illegible] the hungry [illegible] would [illegible] the worms before the party [illegible] [illegible] to [illegible]

[illegible]

[illegible] and Aerosparrows of [illegible] weight [illegible] day, [illegible] resulted in [illegible] [illegible] [illegible] a pound [illegible] than upon [illegible] at the Zoo. [illegible] are [illegible] results.

[illegible] will be made to [illegible] breeding [illegible] the Northern [illegible] [illegible] the Spot and Mow [illegible] but [illegible] year. An [illegible] was [illegible] during these months [illegible] was [illegible] [illegible] the Lumpy or Porcupine [illegible] which she [illegible] sure to [illegible] for [illegible] when that day arrives.

[illegible] New Yorker [illegible] the pride of [illegible] [illegible] [illegible] Australia.

[illegible] was [illegible] here in the [illegible] 1928. [illegible] 10 days after its arrival. The two [illegible] on hand are the only other platypuses which, with the exception of [illegible], [illegible] also outside Australia.

Mr. [illegible] has kept platypuses in [illegible] only in Australia [illegible] years, and has [illegible] [illegible] home that record will at [illegible] be equaled [illegible] Pleasure.

[illegible] was [illegible] [illegible] Argus and [illegible] [illegible] [illegible] the end and [illegible]

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In Mexico, The Society and the Smithsonian Institution, January 16, 1939, discovered the oldest [illegible] of man in the Americas for which we have a date. [illegible] engraved in Mayan characters with [illegible] November 4, 291 B. C. [illegible] by 200 years anything heretofore [illegible]

On November 11, 1935, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, Explorer II, [illegible] altitude record of 72,395 feet. Capt. Albert W. Stevens and Capt. Orvil [illegible] took aloft in the gondola nearly a ton of scientific instruments and obtained results of extraordinary value.

The National Geographic Society-U. S. Army Air [illegible] observed the solar eclipse of 1947. This was the seventh [illegible] of The Society to observe a [illegible] eclipse of the sun.

The Society [illegible] with Dr. William Beebe in [illegible] dives off Bermuda, during which a world record depth of 3,028 feet was attained.

The Society gave $25,000, and in addition $75,000 was given by individual members, to the Government when the congressional appropriation for the purpose [illegible] and the finest of the giant sequoia trees in the Giant Forest of Sequoia National Park of California were thereby saved for [illegible]

One of the world's largest icefields and glacial systems [illegible] Yukon [illegible] Washburn while exploring for The [illegible] the Harvard Institute of Exploration, 1935.

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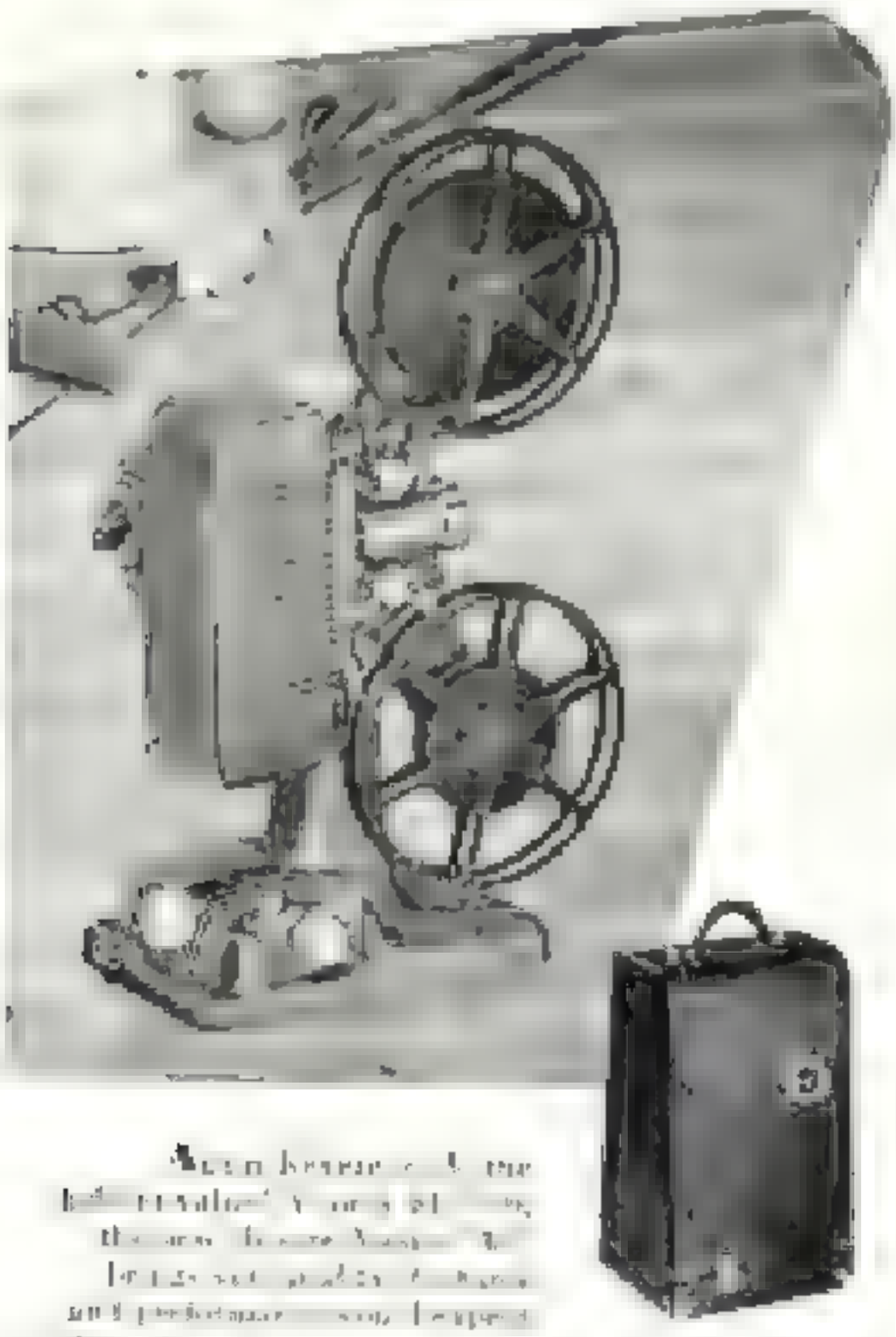

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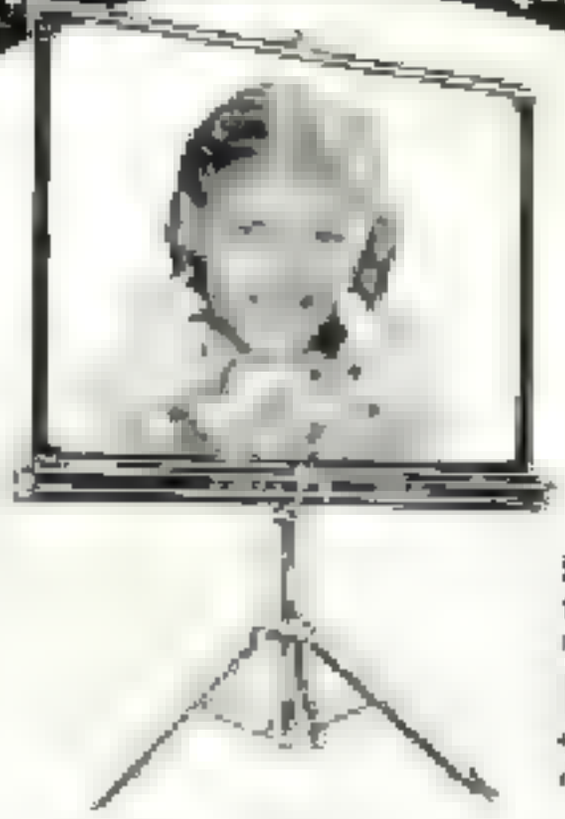

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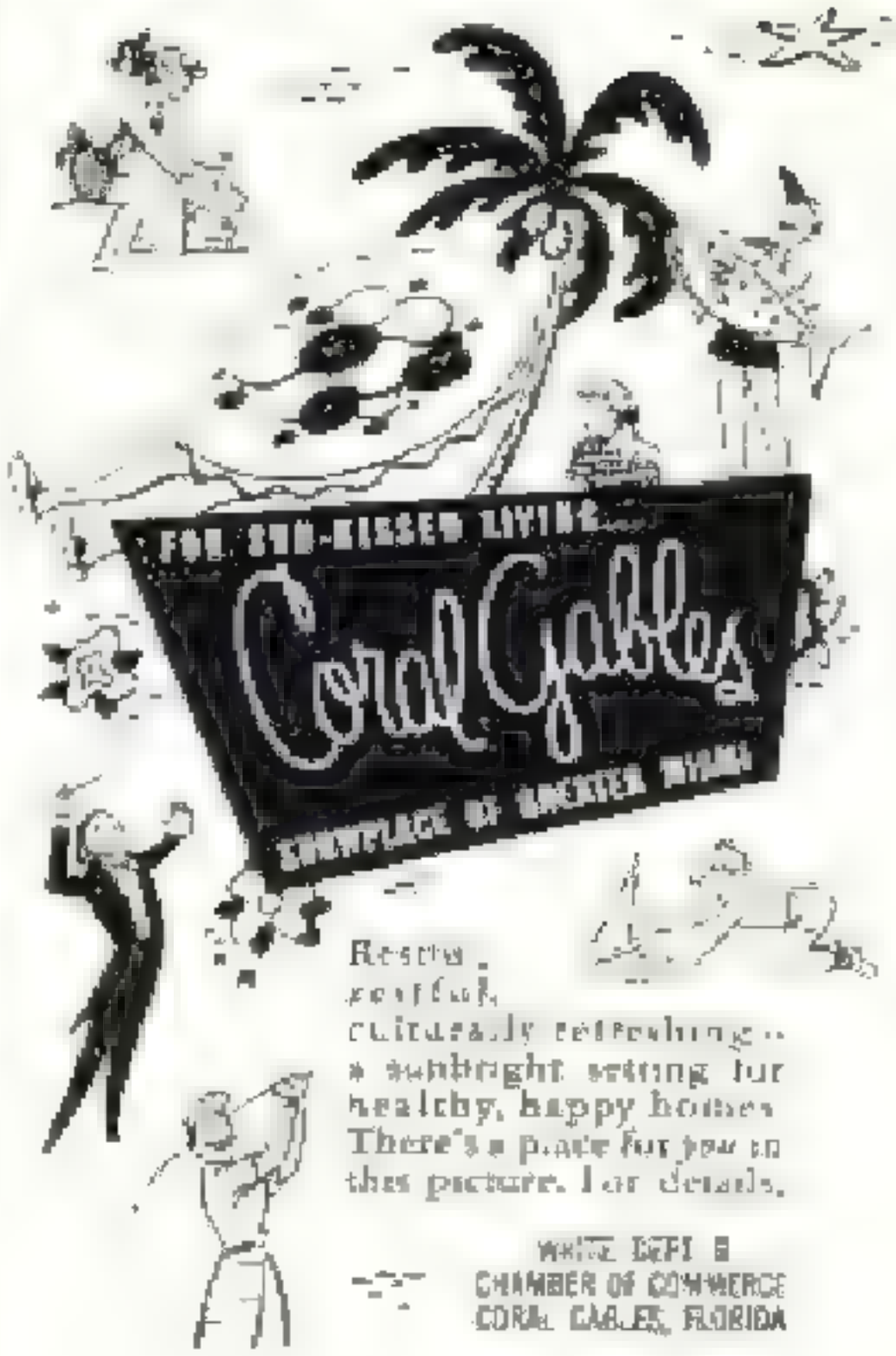

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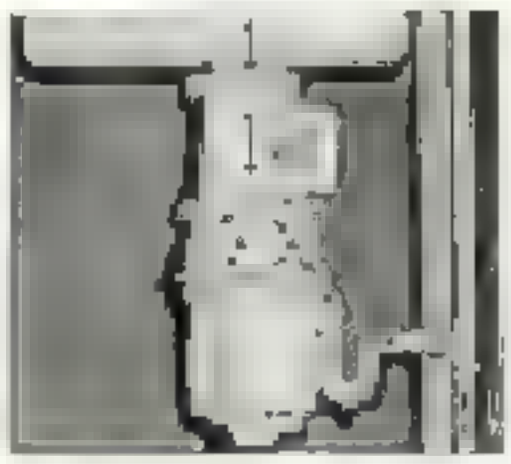

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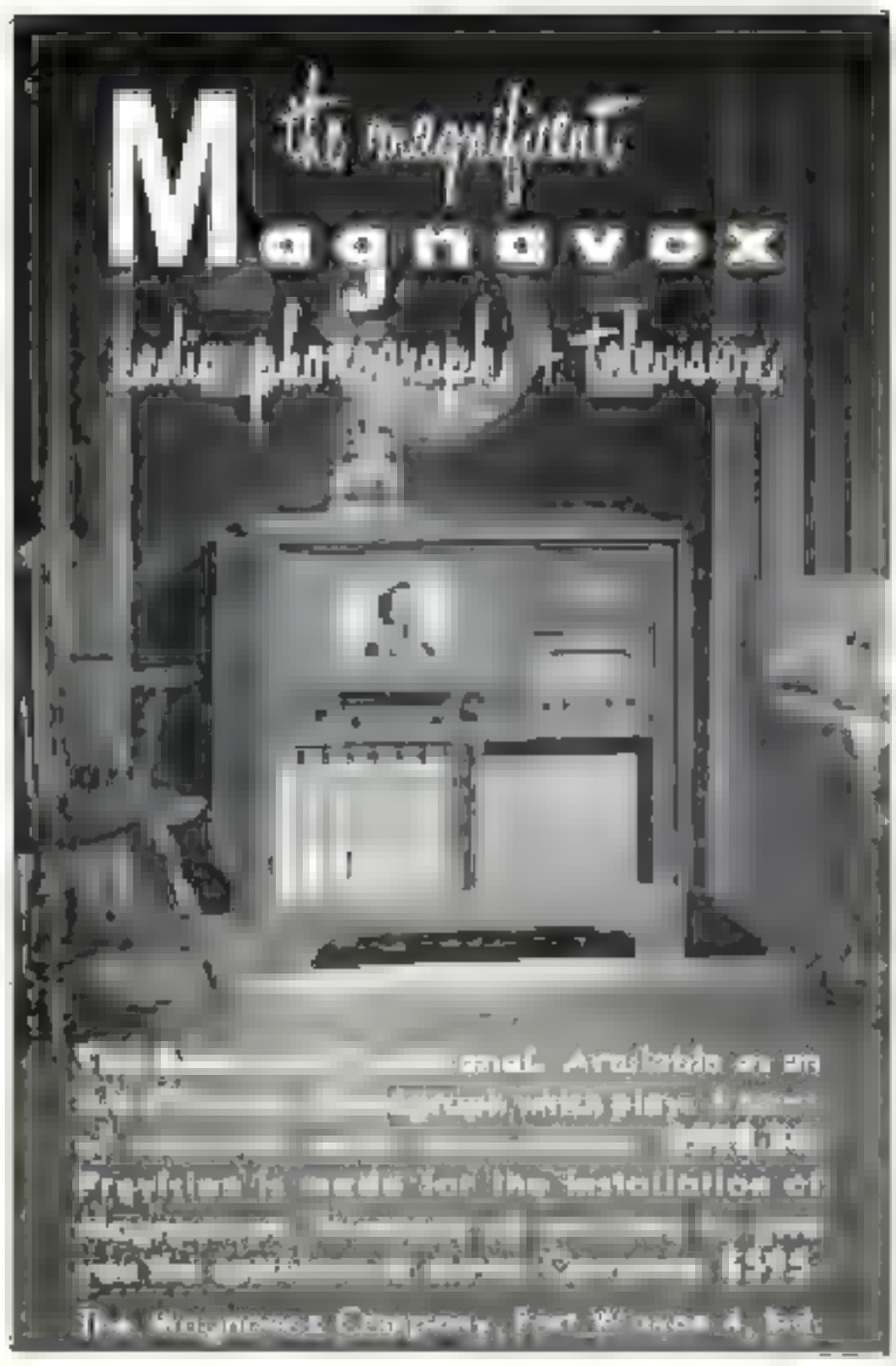
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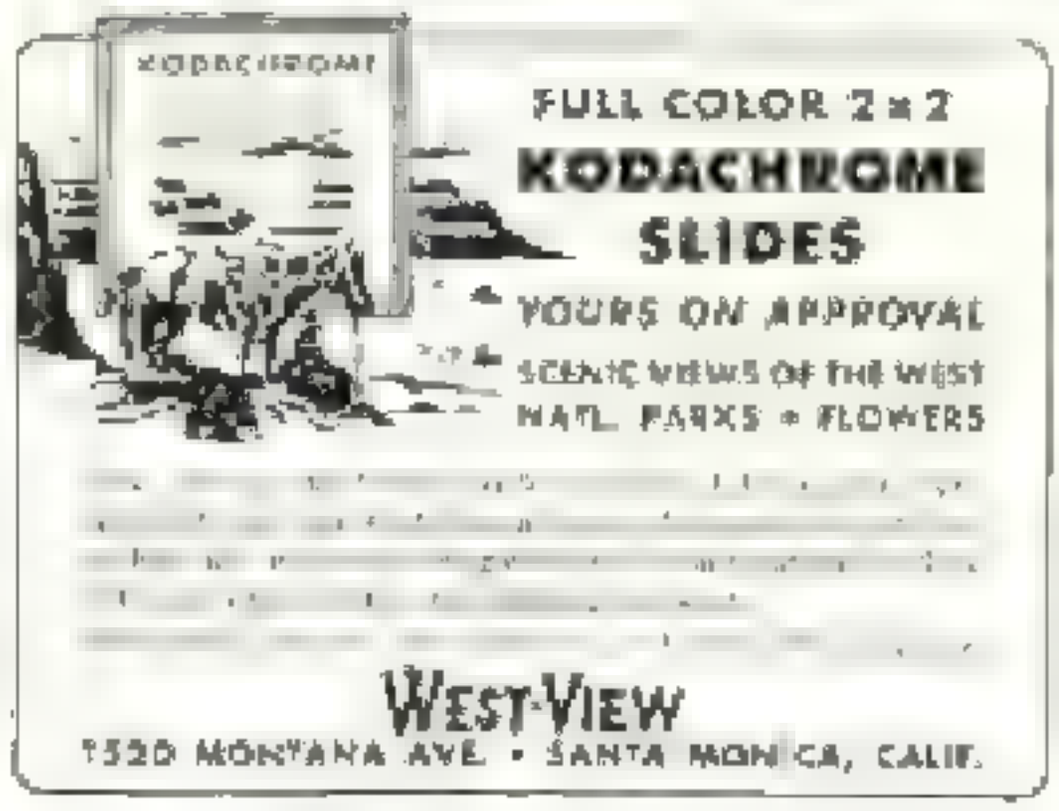
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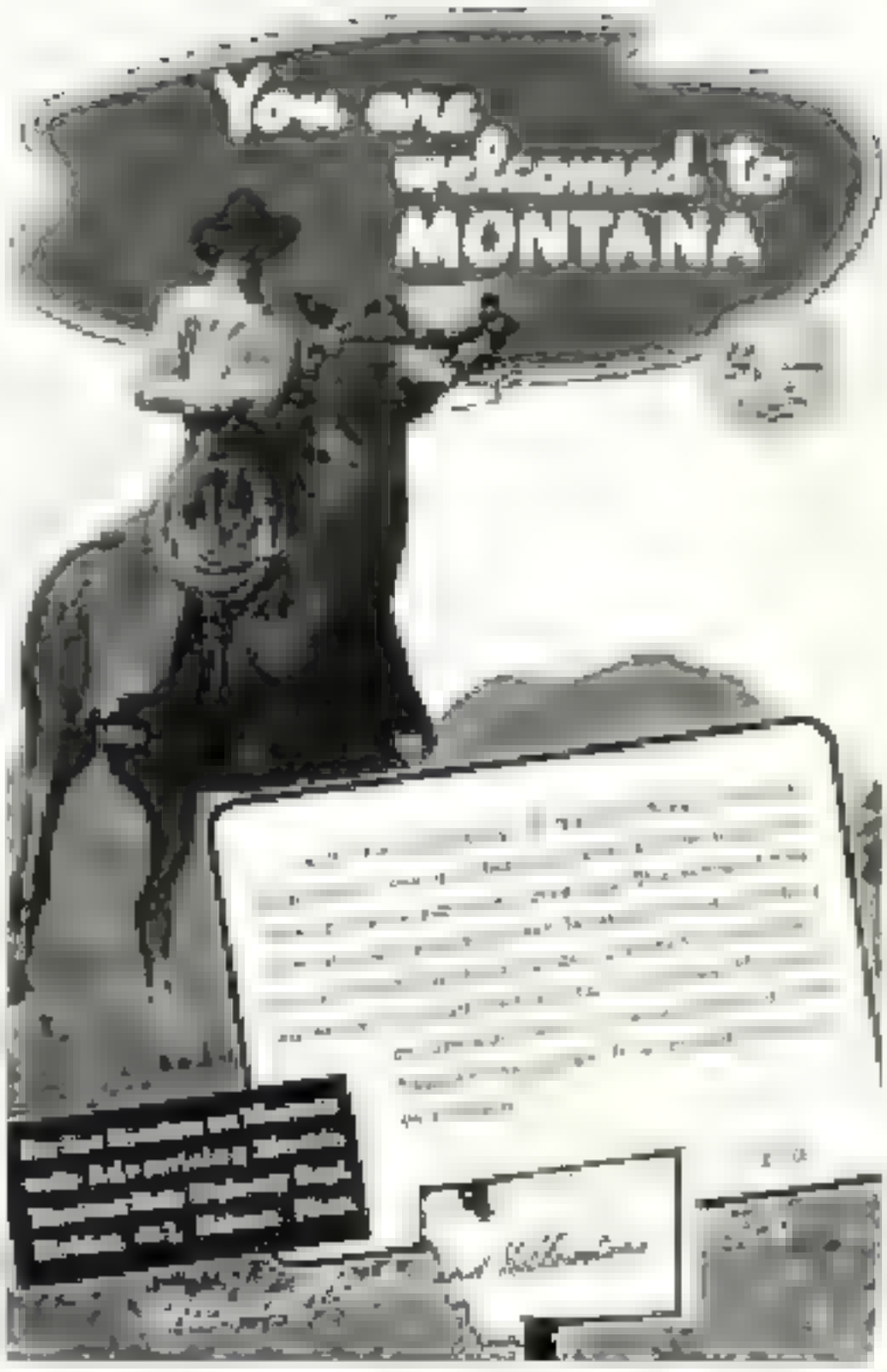
[illegible] your doctor or hearing advisor [illegible] your ears are hearing

ORDER NOW, MAIL THIS COUPON

[illegible]

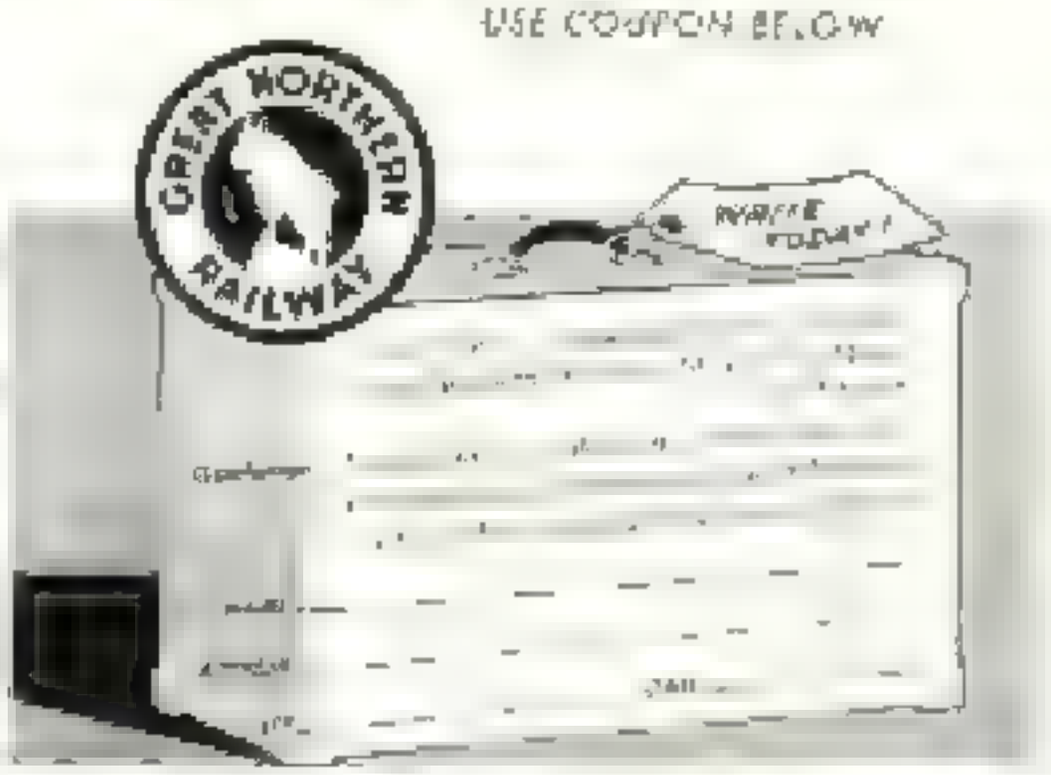


Glacier National Park

in the Montana Rockies

[illegible]

USE COUPON BELOW



Saved...one hundred minutes!

[illegible]

[illegible]

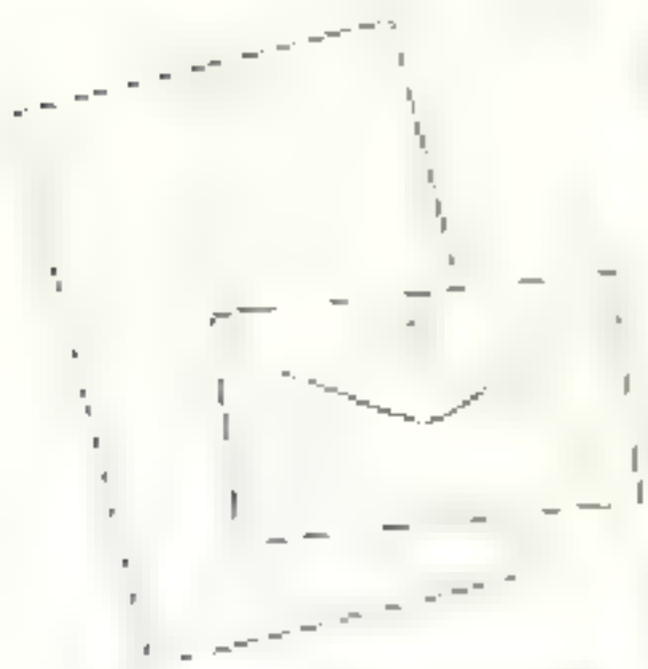
[illegible]

[illegible]

THE AMERICAN STATIONERY COMPANY
[illegible] PARK AVENUE • PERU [illegible]

ENVELOPE PACKAGE

[illegible] $1.00



DELUXE PACKAGE

[illegible] $2.00

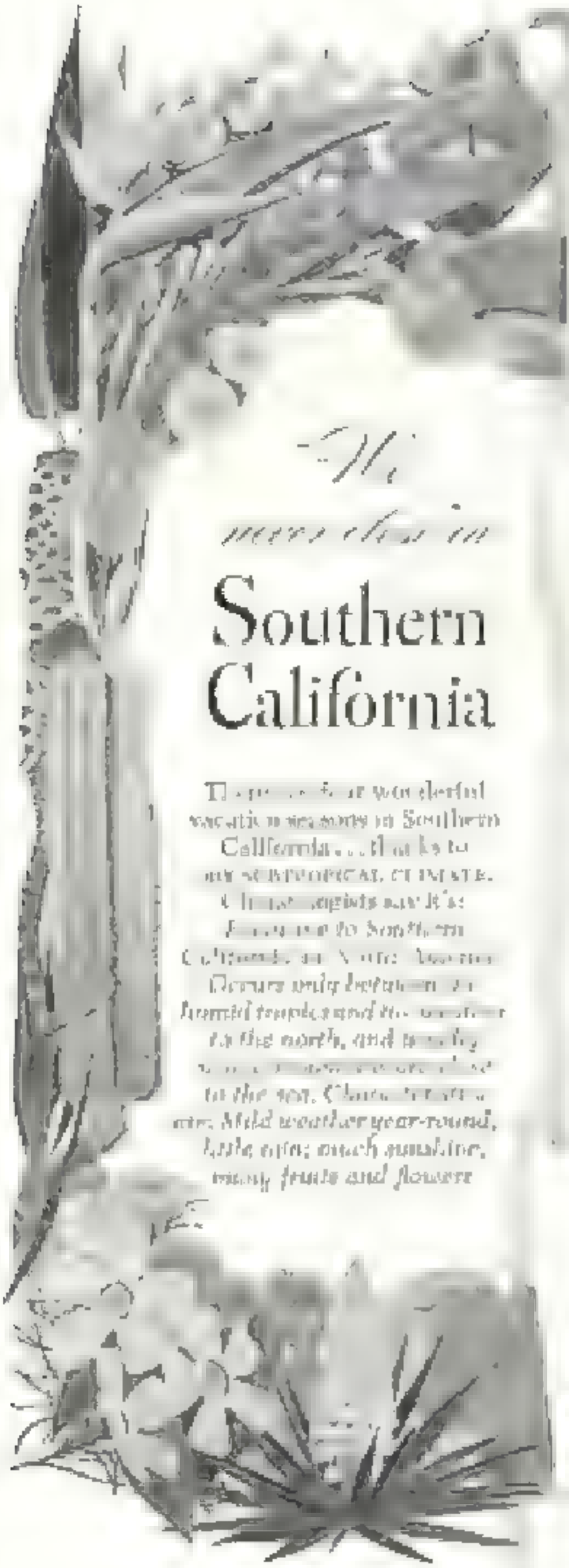
AMERICAN STATIONERY

THE FINE STATIONERY
IN THE PLAIN BOX

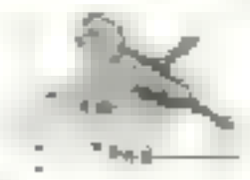
STANDARD PACKAGE

200 Note Sheets
100 Envelopes
$1.00

Printed [illegible] of Your Name on [illegible]



The subtropical climate makes spring months long. Bright wild flowers... great go[illegible]



[illegible]

You'll sleep easier [illegible] And there'll [illegible]

[illegible] variety there are the [illegible] and date [illegible]

Golf [illegible] tennis... [illegible] and sun bathing in the [illegible]

The

never ends in

Southern California

[illegible] wonderful vacation seasons in Southern California... thanks to our SUBTROPICAL CLIMATE. [illegible] Southern California [illegible] Oceans only between [illegible] *tropical mountains to the north, and nearly [illegible] to the sea. Characteristics are: Mild weather year-round, little rain; much sunshine, many fruits and flowers*

America's 4-Season Vacationland

See [illegible] Southern California. Visit All-Year Club's Free Vacation Bureau, 517 West 6th Street, Los Angeles [illegible]

ALL-YEAR CLUB OF SOUTHERN CALIFORNIA, LTD. This advertisement sponsored by the Los Angeles County Board of Supervisors for the citizens of [illegible]

No one should plan to retire here in Southern California unless assured of permanent housing

Free Booklet—Mail Coupon Today

All-Year Club of So. Calif., Dept. [illegible]
628 So. Hill Street, [illegible]

Please send free booklet to [illegible]

Name _____

Street _____

City _____ Zone _____

State _____

Living a Good Life with a Bad Heart

1. To look at him, you would never guess that there is anything wrong with this man's heart. He is just a bit over 60 years old, active, happy, and getting a [illegible] enjoyment out of life—yet he [illegible] disease.

[illegible] his heart [illegible] Of course it was not as strong or as adaptable to such a demands as it had been in youth, but he had no warning signs of heart trouble.

As a result of periodic medical examinations, his doctor was able to detect his impaired heart early, when chances for improvement are best. To [illegible] the physician's advice, this man can lead a useful [illegible] of nearly normal activity.

2. He enjoys many [illegible] forms of exercise, but carefully avoids [illegible] exertion which would further strain his weakened heart.

3. By eating moderately, he helps to lighten the work of his heart during digestion. This helps to avoid overweight, which is always a [illegible] for the heart.

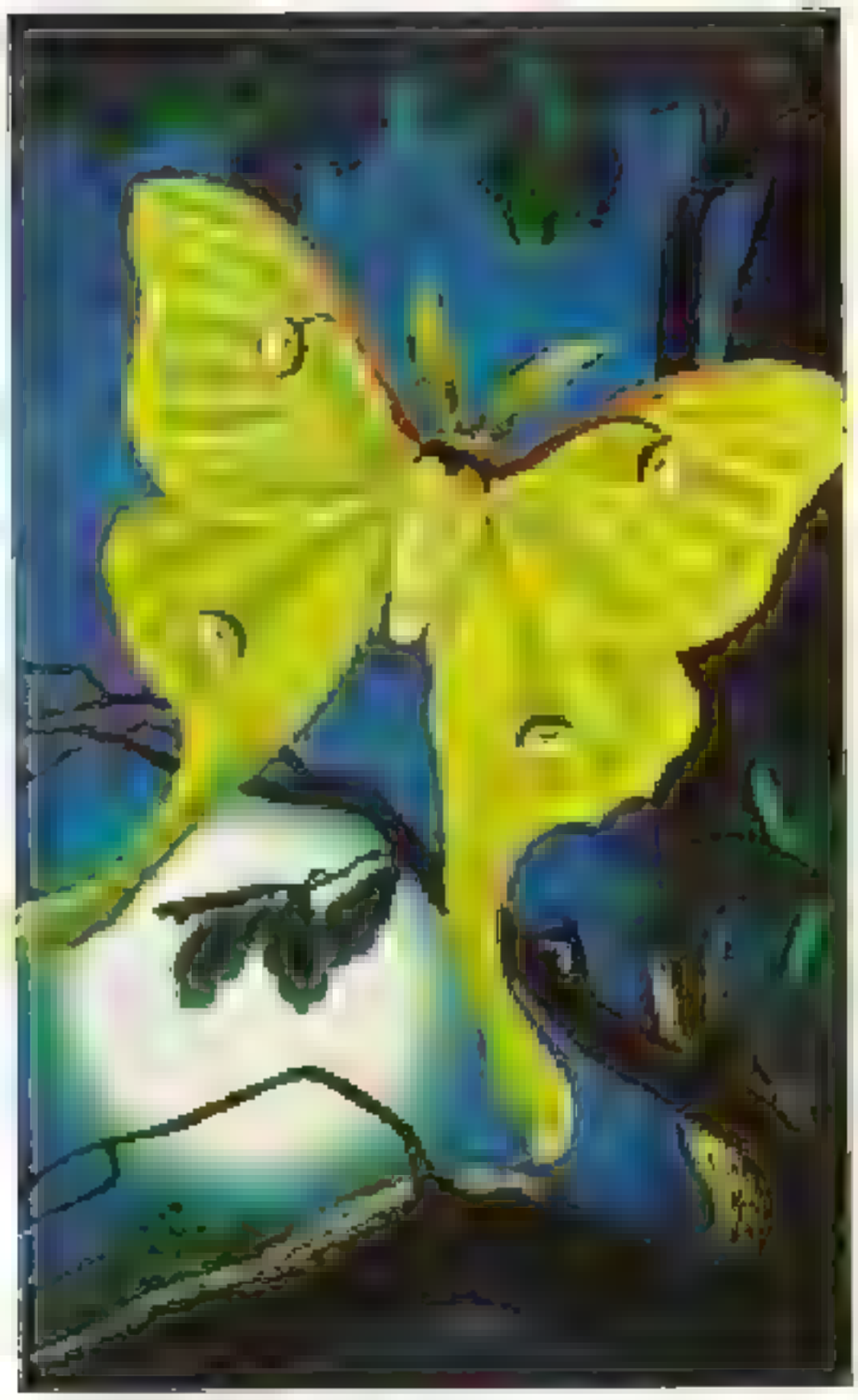
4. He is able to carry on his daily work, but allows plenty of time for sleep and rest. His heart thus will have a chance to rest, too.

5. He maintains a calm and cheerful outlook. For his doctor explained that [illegible] difficult to [illegible]

M[illegible] Metropolitan's free booklet, 2-N, entitled, "Your Heart

Metropolitan Life Insurance Company

TO VETERANS—IF YOU HAVE NATIONAL SERVICE LIFE INSURANCE—KEEP IT!



The happy medium that's happy

B[illegible] night life [illegible] moth and [illegible] of the working ant there is a sharp contrast.

For one there is [illegible] and [illegible]. For the other [illegible] labor without recreation. Nature has [illegible] for living. They [illegible] no choice. Man, however, [illegible] nor ant.

[illegible] life [illegible] needs [illegible] responsibilities. To meet its obligations [illegible] the pleasures of [illegible]. There is a happy medium, for the human race, between the [illegible] and the ant.

There are ways of providing for [illegible] that may arise. These ways are the various forms of [illegible] investment [illegible] to the labor [illegible] the pleasures they make possible.

[illegible]

Life insurance, [illegible] protection is most necessary. [illegible]

For [illegible] counsel about the ways that [illegible] Travelers agent or broker.

MORAL: INSURE IN

The Travelers

ALL FORMS OF INSURANCE AND SURETY BONDS

The Travelers Insurance Company, The Travelers Indemnity Company, The Travelers Fire Insurance Company, The Charter Oak Fire Insurance Company, Hartford, Connecticut. Serving the insurance public in the United States since 1864 and in Canada since 1865.


Inviting workers everywhere to
the pause that refreshes with ice-cold Coca-Cola
5¢
Coca-Cola
Work
refreshed

Wonderful Movies from the very start

PLEASE FILL IN BLANK BELOW, DETACH, AND MAIL TO THE SECRETARY

Recommendation for Membership

IN THE

NATIONAL GEOGRAPHIC SOCIETY

** The Membership Dues, Which Are for the Calendar Year, Include Subscription to the National Geographic Magazine*

To the Secretary, National Geographic Society,
Sixteenth and M Streets Northwest, Washington 6, D. C.: _____ *1949*

I nominate _____

Occupation _____
(This information is important for the records)

Address _____

_____ *for membership in The Society.*

Name of nominating member _____

Address _____

* DUES: Annual membership in United States, $4.00; Canada, $5.00; abroad, $5.00. Life Membership, $100.00 U. S. funds. Remittances should be payable to National Geographic Society. Remittances from outside of continental United States and Canada should be made by New York draft or international money order. 2-49

Can You Guess the Name of This City?

It's a very important city to many millions of people, but you won't find it on the map. It's the Telephone City that the Bell System has built since the war. Every building shown in the picture is a telephone building.

We've taken 392 major building projects and additions that the Bell System has completed throughout the country and had the artist show them in one picture. And that's only one-seventh of the Bell Telephone buildings erected or enlarged since V-J Day. There wasn't room for 2400 others.

These buildings are more than brick and stone and telephone equipment.

They are jobs for thousands of men and women. They are more business for the towns and cities in which they are located. They are more and better telephone service for millions of telephone users.

When you look at all these buildings you can see how the Bell System is growing to catch up with the nation's needs. You can also see why it is necessary for the telephone business to have reasonable earnings.

For the money for buildings like these does not come out of the money you pay for telephone service.

It must come from investors — hundreds of thousands of everyday men and women all over America who are willing to invest their savings in the telephone business.

Reasonable earnings are needed to attract additional investors' dollars. You have an interest in this because these dollars are used to provide you with more and better telephone service.

BELL TELEPHONE SYSTEM

Golden hours under the sparkling Pacific sun bring a new sense of peace on the Lurline

Discover a new life...vibrant, gay, relaxed...

CRUISE TO HAWAII ON THE NEW LURLINE

Matchless days on the loveliest ship afloat. The Lurline gives you every shipboard comfort and enjoyment. Beautiful surroundings . . . new friends, deck games, swimming, sun-bathing, dancing . . . star-filled nights. Food and service are superb.

Then the Islands . . . like green jewels in the Pacific. Yours to explore, yours to know . . . their gentle life, their flower-fragrant air, their warm beaches. Here's a vacation cruise you will never forget. Let your travel agent plan it now.

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